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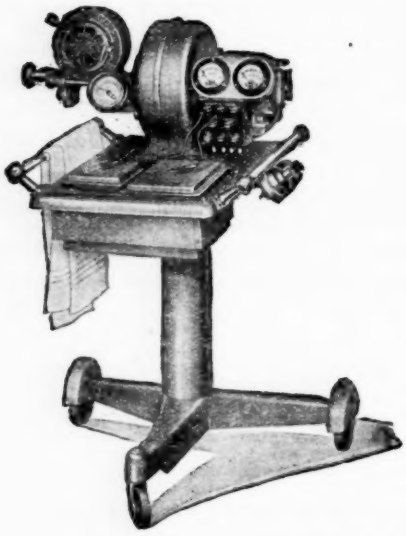

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BY ROBERT GEORGE HOGARTH, C.B.E., F.R.C.S. ENG.,
SENIOR SURGEON, GENERAL HOSPITAL, NOTTINGHAM.

[THE President commenced by expressing his heartfelt appreciation of the honour done him by his election, and by calling attention to the march of medical science as expressed by the great decrease in the general rate of mortality during the last 50 years. He continued:—]

Far more desirable than to make a brave show in the statistical tables and increase the number of nonagenarians and centenarians is to raise the general standard of health among all ages of the community. Let us look at this question from the point of view of the State, since our duty to the State, according to some people, seems to be reckoned higher than our duty to ourselves. During the war public opinion was shocked to discover that the C3 category was so large in comparison, not with the A1, but with the B's and even with the C's. But it did not surprise the doctors, who knew the long catalogue of disabling ailments which afflict the general mass of the people.

The first sets of figures published by those who medically examined the school-children in the elementary schools had already given clear warning. If such distressing percentages prevailed among the children between the ages of 5 and 15, what was to be expected when they grew to manhood? Moreover, a swollen C3 category of men between 18 and 45 necessarily means a still larger percentage of the same category between 45 and 65, after which year, presumably, very few of these damaged people contrive to earn a livelihood. What is true of the men applies no less to the women, and so we have throughout the country an enormous mass of bruised and damaged humanity which never enjoys robust health, which is continually ailing, which provides a multitude of victims for every epidemic, and which, regarded from the purely economic standpoint, never approaches full industrial efficiency, because it is never fit and alert.

I would not paint the picture in too sombre colours. Most of the world's work is routine work, which can be got through more or less satisfactorily at ordinary times, whether, for the purpose of the military category, a man is classed C3 or B2. Nevertheless, the C3 man will be oftener on the sick list; he will make more mistakes; he will produce less; he will lose his job sooner; and at any moment of emergency he will be less trustworthy and reliable. His physical deficiencies will increase with the passing years; he will be less able to protect himself and his family; he is more likely to seek support or stimulant from alcohol and then begin to suffer from its cumulative effect. Would it not therefore be better for the State if we took pride, not in rewriting the tables of mortality, but in raising the C3 people to a higher category—not in view of distant military contingencies, but for the immediate purpose of rendering them more efficient citizens, more valuable producers of wealth, parents of a healthier stock, and themselves more contented with their lot.

If we regard the great stagnant pools of ill-health and the infinite variety of debilitating ailments, deep-seated and chronic, we are driven to the conclusion that physical inefficiency is at once the most permanent and fruitful cause of individual unhappiness and social discontent.

Walt Whitman's lines are worth recalling in this connexion:

> "I think I could turn and live with animals, they are so placid and self-contained;
> I stand and look at them long and long.
> They do not sweat and whine about their condition,
> They do not lie awake in the dark and weep for their sins . . .
> Not one is dissatisfied—not one is demented with the mania of owning things . . .
> Not one is respectable or industrious over the whole earth."

Humans are like animals at least in this, that if they are to be happy and contented they must either keep fit or be kept fit; and the honour of being considered the greatest benefactor to mankind belongs not, as is so often said, to him who can make two blades of grass grow where only one grew before, but to him who can add most to the science of health and raise the standard of fitness throughout the whole community. Surely that would be of more instant value to the State than the preservation of infant life in the first year of existence and the indefinite prolongation of what used to be called the allotted span. If there be any who dislike such a comparison of human values, they may be reassured by the reflection that whatever measures are taken to raise the general standard of life can hardly fail to benefit the infant in the cradle and the aged patient in the Poor-law infirmary.

THE STATE AND THE NATION'S HEALTH: PREVENTIVE LEGISLATION.

If these considerations have weight, it must be one of the paramount duties of the State to concern itself more and more intimately with the health of the nation. It can do that by its solicitude for those who are sick, and by taking whatever measures are possible to keep them from becoming sick. Its action, in a word, must be both curative and preventive. While the science of medicine was mainly empirical and the causes of disease were either unknown or wrongly attributed, preventive measures by the State were little thought of. To-day a long series of Public Health Acts and the still recent creation of a Ministry of Health attest the full recognition and acceptance by the State of this essential administrative function. The right of the State and of the public authority to invade this particular domain is no longer challenged. It is seen to be for the common good that the sanitary and the factory inspector are armed with the sanction of the public authority; and as the ameliorative possibilities, latent in preventive measures are better understood, there will be a growing impatience with the obstacles placed in their way by selfish or interested parties. The establishment of the Ministry of Health bore witness, not to the sudden discovery of a new truth, but to the proved results of much admirable work which had been done in the previous half century and to the need of its more resolute prosecution. We are now accustomed to the blessings of a pure water-supply and efficient systems of drainage and sewerage; we have grown intolerant of the most offensive features of a slum; we have a clearly defined standard of, say, the minimum hygienic requirements of a new house. Throughout the wide field of industrial hygiene we know what conditions are desirable and what are dangerous to health. Our knowledge is fairly complete; the practical difficulties are connected with administration—how to deal with the borderline cases, and how to make the best use of the money at disposal, for improvements are always costly and public expenditure can only be met either out of rates or out of taxes. Public opinion has to be educated continuously all the time. As a rule it proves amenable to tactful handling. For example, the compulsory notification of diseases is now extended far beyond its original scope to as many as 22 notifiable diseases, and will probably be extended much further within the near future. The agitation when the National Health Insurance Act was being passed is now remembered with a smile for the broken vows that were registered never to lick Mr. Lloyd George's new-fangled stamps. But even the greatest changes are very soon accepted as if they had always been,

provided that on the whole the new institution functions well and promotes, in spite of whatever defects, the general well-being.

The scope of preventive legislation is almost limitless, and we are likely to see the State interfering—or shall I say intervening?—more and more in the interests of public health. For example, all the Licensing Acts of the last half-century are based in the last instance on the argument that stricter regulation is necessary for the general public health and safety, and it is obvious that that particular field of controversial legislation is by no means exhausted. Moreover, the State is beginning to assert its regulative powers in departments of social and even of family life from which hitherto it has held aloof, and its justification will always be that the interests of public health override the personal interest of the individual, who, as a member of the community, does not and cannot act to himself alone. We may expect sharp controversy, for example, if and when the State concerns itself directly with eugenics, and asserts its solicitude for a generation not yet born, not by the provision of cradles and nurseries, but even by the very determination of parentage itself. This might have seemed fantastic a few years ago. But now that the idol of State socialism has been set up for our worship, we may be sure that sooner or later the theorists will attempt to invest the Ministry of Health with increasingly autocratic powers, and will seek to transform the whole medical service of this country into a State service, with State hospitals, State examinations for degrees, and the State payment of doctors. This would be a perfectly logical development in a socialist State, nor can it be pretended that such a system could not be worked. But whether it would be as efficient as our present system, whether it would be as acceptable to the general body of the people, and whether the vastly increased cost would be repaid by equivalent advancement of medical knowledge or improvement in the public health, there is room for the very gravest doubts.

DOCTOR AND PATIENT.

The patient's right to choose his medical adviser—which right is indispensable to the creation of a perfect relationship between them—has contributed largely to the smooth working of the National Health Insurance Act. There are roughly 13 million insured persons and rather more than 13,000 medical practitioners on the panels. These are not, as some ill-informed critics of the service would seem to assume, a separate and inferior class of medical men. They are in every sense of the word general practitioners, and the service they give is a general practitioner's service.

To each patient on his list the insurance practitioner accepts the relationship of a family doctor, just as he would do if he were called in by a private patient. He gives to each the skill and the attention within his power, and he gives them, as a rule, cheerfully and willingly, as he has contracted to do. One sometimes hears general complaints of too rapid and casual a diagnosis; but when the waiting-room is full the same complaints are not wholly unheard even in the most august thoroughfares of the London specialists. The true test of value of the service given is to be found in the fact that in 1924 only 404 complaints were received by insurance committees and investigated by their expert subcommittees, and in only four cases did the more serious charges result in the removal of the practitioners' names from the Medical List.

Is it likely that a better service would be provided if each insurance practitioner were selected for inclusion in the list by some official of the Ministry of Health, and if he were required to give an even more detailed and minute account of his practice and submit still more voluminous reports? The panel would still be composed of exactly the same people, and even if the allotted quota of patients were reduced, is it at all certain that the individual patient would receive a greater share of the doctor's attention?

We know what happens in all State services. The red-tape machine would soon be started; more and more reports would be called for; the doctor might see fewer patients, but the volume of his activities would be in no wise lessened; and the cost of the service to the taxpayer would be enormously increased. You will not make the panel doctor a better doctor by making him more of a civil servant and less of a doctor; nor will you make the 13 million patients more contented with their treatment.

The reform that is most required in connexion with the insurance service is one which shall link up the insurance practitioner with the consultant physician and the consultant surgeon, and give the insured patient the benefit of the profession's specialised as well as of its general knowledge.

HOSPITALS AND THE STATE: THE VOLUNTARY HOSPITALS.

Nowhere is the principle of voluntaryism so well worth maintaining as in connexion with the hospitals; nowhere has it been so triumphantly maintained. It is sometimes suggested that the chief virtue of voluntary agencies is to do the rough pioneer work in difficult and intractable places, to create a favourable public opinion, and then, in due process of time, to hand over control to some department of State which will carry on the work upon an altogether larger scale. Indeed, I have seen it stated that voluntaryists ought to be proud to merge their small individualities into the larger being of a public department and to lose themselves like rivers in the sea. But the enthusiastic friends of the voluntary hospitals are human beings, not mere charitable machines which function altruistically because their well-disciplined hearts happen to be set that way. They are proud of their work. They love it. They see results which encourage and inspire them. They do not want to sink themselves, but to express themselves. The gratitude of those who are healed is sweet in their ears. Voluntaryism is the very life and soul of the whole hospital movement. It is not suggested that the hospitals would wither if the voluntary principle were abandoned. They would still multiply and prosper. Their orderly routine might well show an even more brilliant and imposing efficiency. But the rules and regulations would lengthen. The spirit of the institution would suffer change and lose something—I fear much—of its geniality and kindliness. Why is it that such a difference exists to-day between the voluntary hospital and the Poor-law infirmary, which is often better constructed and much better equipped? If you ask a patient to which he would rather be sent, why does he always say the hospital? To some extent the old hard, unforgettable associations and traditions of the Poor-law still chill the heart. But that is not the whole truth. There is something inherent in officialdom which freezes the genial current of the soul, and thaw it as you will by the application of whatever new principles of kindliness and mercy, it can never be thawed right out.

Let us stand by the principle of voluntaryism in the hospitals at whatever cost of energy and patience required for their adequate provision and efficient maintenance. I need not remind this audience that it will take a vast and sustained effort to provide the 10,000 additional beds which the Voluntary Hospitals Commission has declared to be necessary. For that effort the friends of the hospitals will soon have to brace themselves. There is to be no financial assistance from the State. The Minister of Health last February very reluctantly came to the conclusion that no subvention was possible, at any rate at the moment, and so the hope that the Government might repeat its unconditional grant of half a million to the hospitals after the war, in recognition of their invaluable war work and of the utter impossibility during the war period of keeping abreast of their requirements, has been cast to the ground. Unless

this second grant had been as unconditional as the first, I do not know that I am altogether sorry at the Government's decision. If the Ministry had begun to impose conditions of control, it might well have marked the beginning of the end of the voluntary system. I contend that the work done by the hospitals is of such inestimable value, and the confidence placed in them by the public is so well justified, that the State, if it makes any subvention at all, should do so without restrictions, knowing that the money will be judiciously expended. The hospitals should beware of even the mildest beginnings of State control and the relentless, however friendly, grip of any State department. However, as there is to be no grant, these particular anxieties do not arise, and the supporters of the hospitals must shoulder their burden. So large a sum as 4 or 5 millions for new capital expenditure will take a very considerable time to raise; for, over and above all this, the maintenance cost has to be found for each new bed provided, and this means an additional recurrent annual cost of £148 per bed. Many of us were disappointed that once again the Chancellor of the Exchequer in the last Budget failed to exempt bequests to hospitals from liability to legacy duty. That is claimed as an act rather of justice than of grace. The toll taken by the State is an interception of charity which is repugnant to good feeling and a sense of fair play to the suffering. The hospitals, of course, in their turn, owe to their generous supporters the duty of sound economic management, which in turn depends primarily upon the choice of governors. Those which show the best financial balance sheets usually have upon their board of management some outstanding figure of marked ability who has made the local hospital his hobby, his interest, his care, and his pride. However that may be, there must be the undoubted assurance of economic and prudent management if the full support of the public is to be continued. It may well be that a closer coöperation between hospitals—large and small, general and special—is possible and desirable, and that considerable economies might be effected without infringing the real autonomy of each institution, which is so properly and jealously guarded. Charitable effort in this country has always been specially subject to the besetting sin of overlapping and wasteful management; voluntaryists must be ready to face a searching criticism of their accounts by business men whom, if they are wise, they will invite and welcome to their councils.

CHANGING TYPE OF HOSPITAL PATIENT.

The hospital is no longer the lazar-house of the destitute, the place to which homeless and plague-stricken outcasts crawled to die, or into which they were herded if they seemed too noisome and dangerous to be tolerated at large. Such it was in mediæval times; then came the period, which lasted more or less down to our own day, when the hospital was still exclusively used by such as were too poor to pay for the ministrations of a doctor. Some people still hold that this should be the fundamental function of any hospital which is supported by public subscriptions, and I agree that this primary purpose for which hospitals exist—namely, that of taking in and caring for the indigent poor—must in no way be shelved or neglected. But we have advanced far beyond that simple conception in these days, and we shall advance much further still, if only because the hospitals, from being mere infirmaries, have become the centres of the best medical and surgical skill in the areas they serve. The best nursing, the latest scientific apparatus, all are concentrated there for the service of the poor, and while the rich and the well-to-do can look after themselves, there remain large intermediary classes of the population who are cut off from the best skill because, on the one hand, they cannot afford the fees, and, on the other, they are not of the class for which the hospitals were intended. If that were pressed it would indeed be intolerable, especially in view of the increasing expensiveness of any serious operation or illness, the cost of nursing homes, and the palpable unfairness of leaving out in the cold the great body of the middle classes, whose financial betterment has by no means kept pace with that of the superior artisan class, and who have been in the past, according to their means, good and loyal friends of the hospitals.

Wards for Paying Patients.

It is certain, therefore, in my opinion, that we shall see a steady extension of the principle of the paying ward, and even of the paying hospital, for the use of the patient who pays in accordance with his means. In many hospitals to-day all but the very poorest patients are expected to contribute to the cost of their healing, and there is little need to lament the disappearance of the old principle that the hospitals were absolutely free—a principle which, in fact, was often grossly abused. The interests of the middle classes deserve attention no less than those of any other class. May we not, therefore, look forward to a time when every general hospital will be well equipped with paying wards or will have a paying hospital in association with it, served by the same staff and the same nurses? A middle-class patient who is a suitable hospital case could be seen by the almoner of the hospital, and, after stating his income and position, terms could be arranged according to means. Naturally that will open up the question of fees for the surgeon or the physician, and some obvious and possibly difficult adjustments would have to be made; but no vital principle that I can see would be endangered by the payment of these special fees, or even by the hospital itself making a substantial profit on such cases which would help towards the maintenance of more beds in the non-paying wards. Such changes are likely to be gradual; we can carefully note what effect, if any, they have upon the flow of subscriptions. Personally, I do not think that the charitable donor is likely to object to a middle-class paying patient receiving a share of the fruits of his bounty. He had a much more valid grievance against those who abused the freedom of the hospital and never contributed a penny to its funds. The medical profession is generous in accommodating its fees according to the patient's income. But every medical man knows cases where the serious illness of the bread-winner or the wife or child has exhausted the savings of a middle-class home or crippled it with a load of debt. The middle-class patient, moreover, is the principal sufferer from the high fees of the nursing home, another institution which has a necessary place in our existing system for dealing with the cure of disease, but which is by no means immune from well justified criticism. Is it, indeed, too much to say that the extreme expensiveness of nursing homes—I speak, of course, in purely general terms—is contributing as much as anything else to the extension of the system of paying wards in hospitals and the call for its rapid development.

Working-Class Contributions to Hospitals.

There is also another important development in process with regard to the hospitals. More and more in the large cities and industrial areas the hospitals are coming to rely upon the subscriptions of the working classes, contributed through a general hospital Sunday collection or through a direct trade union levy. In this district, for example, the Hospital Saturday Committee are very good friends of the hospitals, contributing willingly, cheerfully, and without condition or stipulation as to the hospital service for their members they will receive in return. This trust is not misplaced. They lose nothing by not dealing in terms of contract and demanding the strict recognition of a right. Many county hospitals are stimulating interest in their work by forming a collecting committee in every village and persuading the cottagers to subscribe to its funds, almost in the same way that they subscribe to a sick or benefit club. This will necessarily lead to a great extension of the hospitals, for those who pay will expect to receive hospital treatment as *a right* in case of serious

illness. When the small contributor begins to talk about "our hospital," the vitalising spirit of voluntaryism is at work. Open the door to State direction and control and the cold east wind of officialism will contrive an entrance too.

THE GENERAL MEDICAL COUNCIL.

Another aspect of the relationship of the medical profession to the public has been much discussed of late in connexion with certain punitive action taken by the General Medical Council. This discussion has removed many misconceptions as to the specific purposes for which the Council was created by the Legislature—not, as was too often supposed, to serve as the executive of a powerful professional organisation protecting the interests of its members but as a body entrusted with powers, clearly defined first by Parliament and later by the judges, for the protection of the public against the incompetence and the imposture of unqualified medical practitioners. Practically the only criticism directed against the Council rises from the fidelity with which, in these days of growing laxity, it has maintained its jealous regard for the purity of its register of membership. There are really two main questions in which the lay public is interested. The first is: Is it or is it not to the public advantage that the General Medical Council should set its face like flint against professional self-advertisement? The second is: Is it or is it not to the public advantage that the Council should show a less uncompromising attitude towards the unqualified practitioner and a greater leniency towards those who transgress its stringent rule against covering?

The rule against professional self-advertisement is unquestionably in the public interest. The publicity agents of the commercial world may sound their slogan as they will about "Truth in advertising." But, as Dr. Johnson once shrewdly observed, the secret of advertising is "large promise"; and large, limitless, boundless promise is wholly out of place in the practice of the medical art. Inseparable from quackery, it is the sign manual of the unqualified nostrum-monger. In my view, this most salutary rule against professional self-advertisement needs to be observed more than ever now that the old reticences are being broken down in so many directions, and in view of the growing disposition to discuss all medical subjects freely in the public press.

Whether we like it or not, that school of thought is prevailing which holds that the open forum is the best of all popular educators, that ignorance is the greatest of all dangers, and that publicity alone can create the new public opinion out of which it is hoped there may issue a higher moral sense and a stronger self-control. The public press will devote more and more space to the manifold problems of public health, and it is obviously desirable that what is written should be written with authority. No anonymous article on a technical or professional subject carries the weight of the signed contribution, and if doctors write for the lay press, as they will be urged to do with an ever-increasing insistence, the opportunities of professional self-advertisement will greatly multiply.

Nevertheless, it is to the common interest of the profession and of the public that these temptations—not, indeed, to inform the public of what is for its good, but to inform it in such a way as to advertise and glorify the writer and conduce to his personal gain—shall be resisted, and that the Medical Council shall still continue to exercise its powerful restraints. In other countries a different practice may be followed, but till it is shown that their method is more conducive than ours, either to the dignity and character of the profession or to the protection of the public from the charlatan and the quack, these restraints should not be weakened. Many borderline cases are bound to occur as they do at present, but I assume that the Council will continue to act with that judicial discretion which has on several occasions received the acknowledgment of the highest legal authorities.

UNQUALIFIED PRACTITIONERS.

As for the unqualified practitioner, I say without hesitation that the Medical Council cannot and must not recognise him, and therefore cannot and must not abate its strong reprobation of covering. To do so would be to stultify itself and the Register, which is its special creation and instrument. It cannot, to borrow an expression from another profession, recognise any orders but its own. I do not mean that it should seek to induce the State, as is done in some countries, to make unqualified practice illegal. Even if that were desirable, the public would not permit it. Public opinion, if I may say so, has a sporting fancy for the outsider, and outsiders, even the rankest, do sometimes win. But, though rare and exceptional cases may arise, the Council cannot extend either the bow of friendship or the nod of recognition to any unqualified practitioner without placing itself in a false position. If an unqualified practitioner really discovers a new cure or treatment for one of the ills of humanity, his consulting room will not long remain empty of patients. If his method is genuine it will endure, and, soon or late, it will win general recognition. But no one can reasonably expect admission to the Medical Register—or to any appendix thereto—by any except the approved channel. Admission is not a question of initiation and secret rite; it is a plain question whether the entrant has gone through certain courses of medical training and passed the presented examinations. How can either be abandoned with safety to the public interest? The unqualified practitioner may or may not have sufficient general medical knowledge to enable him to make a diagnosis. A few may have gone through some sort of a medical course; the majority have not. It takes the ordinary medical man five years or more to complete his course; the unqualified man often does not give as many months. He professes to be a specialist without even elementary grounding in the essential rudiments of medical knowledge. I say nothing against the science of osteopathy or these uses of the manipulative treatment. I only say that those who practise these arts should have the medical knowledge without which they may do their patients infinite harm.

The champions of the unqualified practitioner fall into two main classes. One consists of those good people, invincibly credulous and optimistic by nature, who chatter about cures and treatment as others chatter about politics, and on whose ears well-syllabled words like "osteopathy" and "manipulation" fall with a sweetly modulated cadence of solace and hope. The other class consists of the ingenious rebels against all authority but their own, the sophists of the day, who deride professional etiquette and grimace at professional tradition. Perhaps here and there certain solemn pomposities do linger even yet in our profession, and an occasional grin at these may do no harm; but the health of the public is no grinning matter. The plain truth remains that behind the rare—the very rare—unqualified practitioners of whose success so much is made, but whose failures pass unrecorded, there are scores of other practitioners of technique ancient and modern, Chaldean and transatlantic, who are eager to take advantage of any momentary opening of the door, which it is the declared policy of the General Medical Council to keep tightly shut. A selfish, obscurantist policy would be totally contrary to the free spirit of inquiry which animates the medical science of to-day. But this is neither selfish nor obscurantist. Whatever in any modern technique is tested and proved good is sure of eventual adoption, and not even the gates of the General Medical Council will prevail against it. But the tests and the proofs must be such as are recognised by that universal medical science which talks a common language throughout the world and which alone can securely judge. The public mind was, perhaps, never more impatient of authority than it is to-day. Unable to distinguish with certainty where the trained expert alone has any claim to be

heard, multitudes of people are still prepared to accept offhand the morning and the evening stunt of their favourite newspapers, which are then forgotten as soon as read. So many romantic impossibilities of yesterday have become the casual scientific commonplace of to-day that the very word "miracle" itself has shrunk back to its original connotation, and even the wisest have still no effective retort to Hamlet's gibe as to the inadequacy of their philosophy to embrace the content of heaven and earth. Nevertheless, Authority remains unshaken on her intellectual throne, though the gusts of change may a little disorder her raiment, and Authority herself acquires a riper wisdom and a larger experience with the passage of the years.

The medical profession is a living profession. It is for ever breaking new ground, mapping and charting as it goes, and the necessary correction of a too hasty observation or faulty induction, as well as the need to include new knowledge, requires us from time to time to revise our atlases. And though we may be fairly confident that the older continents are now accurately charted, there is always the need to be prepared for the crash of old-established notions and for restless movements of insurgence along boundaries which once appeared to have been fixed for all time. It is a sobering reflection that, but for the violent wrench out of its true direction which medical science suffered two thousand years ago, some of our most recent discoveries might well have been among the oldest blessings to suffering humanity. With the abandonment of the one true scientific method of patient observation and careful induction there was also unhappily discarded that sagest of all the medical maxims of ancient Hellas, that the physician is the servant of Nature. The human race has suffered sorely because medical art and science took so tragically wrong a turning, after making so brilliant a start. Probably the perversity of the patient was largely responsible. Popular demand has always been insistent for the bottle of medicine and the charm. Science, under the lead of Aristotle, had sought to exorcise the potion-monger and the thaumaturgist, but back they came with a rush, and when the ancient scientist candidly admitted that he was uncertain as to the nature or the cure of the complaint, the patient soon betook himself to one who promised a safe, quick, and pleasant cure.

The great truth that the supernatural and the scientific do not run well in double harness needs, I believe, a resonant restatement to-day. The profession is often blamed for its instinctive repugnance to the introduction of the supernatural into the art of healing. This is attributed to that professional jealousy which is supposed to seize every doctor when an unregistered hand assumes the gold-headed cane which is the symbol of his craft. I do not know that there is more professional jealousy among doctors than there is among lawyers; I doubt if there is as much as among plumbers and bricklayers. No professional body loves an outsider who usurps its own particular functions, and long experience has shown that the unqualified practitioner of medicine is in double measure an unqualified danger to the public. And yet how clients troop to his door or rain in upon him a shower of post-office orders if he is a shrewd exploiter at once of the foibles and the earnest longings of mankind. So it has ever been; so it will ever be. As the cynic long ago said: "If the public want to be deceived, let them." But the obvious fact is that the public want not to be deceived but to be cured, and that is why, if an authorised prescription in our cryptic Latin fails to bring relief they will cheerfully take a free medical tip in plain English from their Sunday paper's answers to correspondents, or accept as gospel the large promise of displayed advertisement; or if they are of a more serious and contemplative type, they will haunt the temples of those who say that they possess the secret of permanent good health.

THE RELIGIOUS HEALER.

With respect to the religious and quasi-religious healer, the medical profession is in a difficult position. It is precluded by the memory of its own empirical past from adorning its robes with the fragile fringes of infallibility. Dedicated to science and conscious of boundless horizons still beyond its ken, whatever face the profession may present to the outer world, it must display in the intimate presence of truth the modesty of the neophyte. Nor can it refuse to acknowledge the sincerity of other searchers after truth travelling upon roads other than that on which its own feet are set. Nevertheless, the profession owes to itself and to the public the duty of speaking out.

There is no difficulty, of course, in dealing with the vulgar quack who sells a bottled panacea to the joint benefit of himself and the Inland Revenue, and who leaves the deluded purchaser, if he be lucky, much the same as he was before. But obvious difficulty arises when a new theory and practice of the art of healing is proclaimed and health is taught in terms of religion, and religion in terms of health. In that company the medical scientist has no place. His facts are not theirs. Their terminology is not his. There is no meeting ground in common. He knows what he understands by science; he does not know what they mean. Even if he were willing to join the new cult, its complete refusal to recognise the need of a medical art, such as that which he practises, must effectually keep the door of communication closed. Science has long since framed her own laws of method and proof which are recognised throughout the world, and the medical profession can have no commerce with any newly organised cult which denies the very bases on which these laws are founded. But this is not to say that no friendly coöperation is possible between doctors and those who are earnestly studying the healing power of the mind. Let there be no contention about names; when we speak of mind or soul, let us freely admit that we cannot take a specimen of either on a slide and put it under a microscope. That there is a certain healing power, a true *vis medicatrix*, in religion as in nature, few careful observers would, I think, deny. Between religion and nature, between mind and body, there exists not an opposition but a relation. Every medical man of experience must have known cases in which his own scientific skill has seemed to be helped, sometimes most strangely and wonderfully, by some serenity of mind in the patient, some quiet confidence in the ultimate issue, some realisation of sure dependence upon a higher power, some tranquillising influence of the soul upon the physical stress and tumult of the senses—beneficent, soothing, healing activities in which he and his art have had little or no share.

These facts are not reducible to formulæ. Science cannot explain them as she can explain the operation of an anodyne stealing along the passage ways of sense. We do not, indeed, know very much about that mysterious parallel road, which always lies in deep shadow, where the mind or the soul, reacting to a spirit which seems to come from without, influences profoundly in its turn the body which the doctor is trying to heal. There is no place in respect of this region for dogmatic utterance; but there is always room for patient and reverent inquiry. The whole of our profession will await with impartial mind the result of the labours of the joint committee which was appointed some months ago to investigate the phenomena of what is generally called spiritual healing. Meanwhile, I say with confidence that any systematised creed which professes to dispense with the art of medicine and surgery is false to the Divine. But if any possess the precious gift of ministering to the mind diseased or of imparting to those who walk in the shadow of the valley the courage to move serenely among the phantoms and terrors which haunt that road, let us be sure that so divine a gift can only emanate from a divine source, and let us welcome the help of any unseen wings that stir the air with healing. In such moments the old tradition

is confirmed that the doctor stands in a different relation to his fellow from most other professional men. I do not claim that the doctor consciously lives, like the priest, what is called a dedicated life—though I have known men to whom that noble phrase might well be applied—but there is a special nexus between doctor and patient which is independent of, as it is unpurchased by, the fee which passes between them. The public expect much of the doctor and take much for granted. I like that old story of the woman of Selkirk who, observing her doctor ride by, said to the neighbour with whom she was gossiping, "Aye, there goes the doctor—honest man! He's brought all my ten bairns into the world and never got a rap for one of them."

THE REAL DOCTOR.

The national health insurance scheme has at any rate checked the more unconscionable draughts which once used to be made upon the deep well of medical disinterestedness, but the profession still gives much for which it receives no direct return but gratitude, and sometimes even that is left unspoken. That, however, is the penalty of altruism and an established reputation for kindness of heart, and that is partly why the doctor holds his place in the public esteem, despite the satirists, the playwrights, and the novelists who still delight to poke their fun—on the whole not unfriendly—at his etiquette, his bedside manner, his scraps of weird Latinity, and the artifice with which the wild surmise of an impossible diagnosis may still be masked under the grave, slow smile of apparently assumed certainty.

If we want the portrait of the real doctor we go, not to books, but to life. We expect him, not in vain, to combine with knowledge the understanding that springs from intuition till it is most richly reinforced by experience, to bear a tranquillising influence, and to radiate confidence and hope. We expect him to exemplify, like the surgeon of whom Henley wrote:

> "Faultless patience and unyielding will,
> Beautiful gentleness and splendid skill,"

caring always for life as a thing most precious, quick—and now happily well able—to spare the sufferer one unnecessary pang, the restorer of health, a strong sure help in the more supreme moments:

> "In many a house of care, when pain has forced a footing there,
> And there's a Darkness on the stair will not be turned away."

Such is the doctor, the family doctor, who is more to the public at large than the most learned and the most wise who dwell in those two long, unlovely, parallel streets of London, where the waters of healing are laid on at the main. He is still the same, even though he is called upon in these days to enter the service—the preventive service—of the Ministry of Health, disarming disease before it strikes, saving the firstborn, not by a smear of blood on the lintel, but by a dash of disinfectant in the drain, and sometimes purchasing the immunity of millions as cheaply as the restoration of a few convalescents to health. The doctor's professional qualifications may change as medical science advances; the qualifications he needs to win him the confidence of his fellows are unchangeable as human nature itself. That confidence it is the policy of this great Association and the desire of every one of its members always to deserve and for ever to retain.

FOUNDERS OF WESTMINSTER HOSPITAL. — On July 14th the Lord Chancellor, Lord Cave, unveiled at Westminster Hospital a tablet recording the names of the founders in 1719, and of the presidents, chairmen, and treasurers at the time of its erection on the present site in 1834, and of its reconstruction in 1923–24. The original founders were Henry Hoare, William Wogan, Robert Whitham, Patrick Cockburn, and Thomas Wisdome. The Hoare family have continued to be closely connected with the hospital, but no descendants of the other founders have been traced.

An Address
ON
PROGRESS IN PSYCHIATRY.

Delivered before the Section of Psychiatry, Royal Society of Medicine

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THE practice of psychiatry is partly science, partly art. It is not unlike war, where the unchanging principles of strategy are but little influenced by the ever-progressing science of tactics. The pathology and treatment of the insane make steady strides, while the problems presented by the relationship of law and public opinion to disordered conduct seem to remain remarkably constant, and require adjustment by successive generations. I am able to recall changes and progress in the medical aspects of psychiatry, while I find a recurrence to-day of many ethical and legal questions which were being raised in similar terms when psychiatry first claimed my attention. From the days of my boyhood I was interested in that ancient institution at Hanwell, by reason of its proximity to my home. When I began practice over three decades ago, London was a city of hansoms and horse 'buses, motor-cars were a joke, houses were mainly lit by gas, and the telephone was an uncertain luxury. Flight in heavier than air machines was scarcely dreamed of outside the laboratories of scientific folk, and the gramophone and wireless were still far from finding a place in every home. I should like to remind you of some of the dominating figures in our specialty at that period. Their names will aid me in outlining the position of psychiatry and its handmaiden psychology, in the days to which I refer. I shall then proceed to indicate some of the steps that I consider to have been the most important advances during my professional life, and the influences they are likely to exert on the future. In Britain we had Maudsley, Blandford, Hack Tuke, Savage, and Clouston, all of whom were in active work. I had the good fortune to be closely associated with Maudsley during my early days, and I could dilate at length upon the sayings of this remarkable sage. Mercier was commencing a steady output of valuable writings, which are now, I regret to think, too little studied. Crichton-Browne was already renowned as an orator, and him we happily have with us to-day. The late Clifford Allbutt became a member of the Lunacy Commission, now the Board of Control, and the present Lunacy Acts were coming into operation, not without some travail to the psychiatrists of the day.

Both psychiatry and psychology were on the eve of great developments. The French school was pushing hypnotism, and was sharply divided by Bernheim at Nancy, and Charcot in Paris, both of which centres I proceeded to visit. The subject of hypnotism was very much in evidence at home, and was investigated by a committee of the British Medical Association. Extensive claims were being made for the future of this method of treatment, but in England, Germany, and America it was not found to be of great use in the psychoses, though its value was recognised when applied to hysteria. G. M. Robertson, of Edinburgh, and Percy Smith in London did a great deal to give hypnotism its proper place as a means of treatment. The interest in hypnotism was very wide and had far-reaching results. It acted as a stimulus to many who were, like myself, confronted with mental phenomena that seemed to have little or no explanation.

EARLY DIFFICULTIES IN THE STUDY OF PSYCHIATRY.

Let me give you some idea of the perplexity of a young medical man who wished to engage in psychiatry

in the times of which I am now speaking. Medical students still "walked" the London hospitals, though it was necessary to hold clinical clerkships and dresserships before being admitted to the final examinations. At my own hospital, as with many others, no lectures were given on psychological medicine, the subject being for the most part lightly dealt with from the medico-legal standpoint by the lecturer on forensic medicine. Many of us qualified without ever having seen a clinical demonstration, though some of us attempted to remedy matters by attending Bethlem or St. Luke's Hospital.

Psychology was a closed book, and was regarded as a subject for philosophers and divines, and outside the scope of medicine. As a consequence a medical man took up an asylum appointment with a sublime ignorance of the mental maladies of the patients he was to treat, and the novel clinical material was at first confusing and disheartening. Psychology was then focused on the cognitive aspect of mental processes. The older methods of introspection had been modified by the experimental psychologists. Weber and Fechner had originated psycho-physical researches. Helmholtz had given us his fine work on sensation. Wundt was still absorbed in research along experimental lines. The purely academic student still perused the writings of Mill, Spencer, Sully, and others, though the classical text-book of William James in America soon became the standard work after its publication in 1890. Psychology almost seemed to deserve the epithets hurled at it by the energetic young psychiatrist. It did little to assist him in his special study, and seemed remote from human affairs.

Psychiatry was almost as sterile, although Maudsley, Clouston, and Savage did much to awaken it by their stimulating writings. Clinical descriptions in the text-books of the times were good, but pathology was little understood and psycho-pathology was practically non-existent. Tuke's dictionary may perhaps serve as the most useful guide to the psychiatric ideas of this era.

PROGRESS IN RESEARCH ON THE NERVOUS SYSTEM.

Progress in psychiatry is closely linked with progress in psychology, and advances in many sciences beside medicine. I should like to refer here to the accumulation of knowledge that has taken place in my time on the structure of the nervous system and its functions. For long it was held that if enough were known of the brain and cord, the mystery of mind would be explained. An immense amount of work has been done on anatomical, embryological, physiological, and clinical lines to define with increasing accuracy the structure and proper functioning of the nervous system. Moreover, the knowledge of the autonomic system, its functions and relation to the later cerebro-spinal system, together with the structure and biochemistry of the endocrine glands has grown in a manner which seems to leave little to be discovered with our present means of investigation.

Most of this work has been done in the past three decades, and when I entered medicine a great impetus was being given to the histology of the nervous system by improved methods of staining and the development of the microscope. It may serve to remind you of the scope and detail of these and allied investigations if I recall to your memory the names of workers like Hughlings Jackson, Flechsig, Mott, Bolton, Elliot Smith, Golgi, Gaskell, Langley, Sherrington, Head, Pavlow, and many others. The work of Orr and Rows on the path of infection in the nervous system by means of the lymphatic circulation was an important contribution to psychiatry, and is a fine example of the use that can be made of pathological material in mental hospitals. The distinguished physiologist Sharpey Schafer has taught us much of the endocrines, closely followed by the introduction of glandular therapy. It may be speculation to suggest that further progress may result from the introduction of the use of ultra-violet rays in microscopy. It does seem that advance in the anatomy and physiology of the nervous system must depend upon progress in laboratory methods, and the results of researches which we may expect to increase the field of the microscope, and teach us more of the properties of the living cell.

In spite of this work on the central nervous system we have much yet to learn to establish the physical basis of mind on a satisfactory foundation. Few will maintain that consciousness can exist without brain. It has become obvious that the size, quality, and structure of the brain is an index of the intelligence of its possessor. But we cannot yet speak of mind in terms of cerebral function, with all that we have learned of the cortex, both in health and disease.

NEW PSYCHOLOGICAL CONCEPTIONS.

These observations bring one to the almost startling growth of fresh psychological views, which have thrown new light on the mechanism of insane conduct and symptoms, and provide new hopes for the future.

I regard the illuminating writings of Janet as a landmark in the progress of psychiatry. His conceptions of dissociation, and his clear descriptions of the possible psycho-pathology of hysteria and psychasthenia were an inspiration to many, and merit careful study to-day. His views were taken up in America by Morton Prince and others, and paved the way for the psycho-analytic movement based upon the work of Freud. This movement has attracted followers all over the world, and has produced an immense literature. Original psycho-analytic conceptions have met with powerful opposition, some of which is reflected in the establishment of separate schools headed by Jung and Adler. There are certain features of the work of Freud which are worthy of careful notice. Firstly, it is based upon clinical observations. Secondly, it appears to obtain biological confirmation. That is to say, it is claimed that the concept of primitive mental processes, obeying the pleasure principle, receives some support when applied to child study, fairy tales, folk-lore, philology, and anthropology. Further, no work has done so much to attach meaning to the apparently meaningless symptoms of insanity.

As I have indicated, psychology in my early days of practice was academic, and attention was centred upon the intellectual aspect of consciousness. The psycho-analytic and other schools have moved the interest to the field of instinct. Indeed, psychology has since become vitalised and brought into very close relation to psychiatry. Many workers have contributed to this desirable result. McDougall's work on instinct and social psychology has educated many beside the psychiatrist, so also did the work of Rivers. Trotter's original enunciation of the herd instinct is a splendid contribution from a surgeon, and has done a great deal to clarify the conception of conflict in psychiatry.

Psychology is making new demands, and is being applied to social as well as medical problems. There has recently developed most instructive work on industrial psychology, initiated by C. S. Myers. His investigations into fatigue in industrialism, and the conditions which govern the output of work in factories and workshops make fascinating reading. It seems to me that medical psychology has an increasing responsibility in relation to social life. Not only must we be called in to place on a scientific basis the nature of occupation, hours of work and repose, and proper recreation, but studies are necessary on such questions as the influence of alcohol and tobacco on work, the conditions which affect sleep, and the selection of careers by the young. There are yet more general questions which the psychiatrist must assist in solving. Recent controversies indicate that some modern trends in art are abnormal and have a psycho-pathology of their own. Changes are taking place in religious beliefs. The political world is disturbed and full of unrest.

The underlying causes are psychological and the medical psychologist should be able to elucidate them. There is no end to the applications of modern psychology. Why, for example, should engineers be more susceptible to Communism than miners or factory workers, as has recently been alleged?

But to us the application of the new psychology to psychiatry is of chief importance. What has it done? What is it going to do in the future? The answers may be summarised by the three words psycho-pathology, psychotherapy, and prevention.

Psycho-pathology has been given a reincarnation. It is evident that many of the novel concepts concerning the mechanism of mind are finding a permanent place in the literature of psychiatry. Terms like conflict, repression, projection, sublimation, transference, and libido are familiar to us all, and provide us with fresh implements for research and treatment. The causation of the psychoses has been placed in a new light, and for the first time in the history of psychiatry a scientific explanation of the bizarre conduct of the psychotic patient is available. The future holds great things in store for psycho-pathology, and I venture to point out the scope for psycho-pathological research to be found in our mental hospitals. The chronic type of patient has much to teach us as to the sources and development of delusions and hallucinations.

Psychotherapy has advanced far during my time. Its practice is capturing the attention of the general physician more and more and its place in medicine is assured. Psycho-analysis is one method of several approaches to psychotherapy, but it is yet early to speak with conviction concerning the results of analysis. The method seems of little use in the established psychoses. No army of analysts could successfully return to normal life the chronic patients living sheltered lives in the institutions of our country. As to early cases and psychoneurotics there seems to be little information available to determine whether psycho-analysis obtains better results than older methods of treatment. Discussion concerning the nature and functions of the unconscious mind continues. Different schools have their own methods of treatment and investigation, and seem to diverge along paths whose end is not yet in sight. Some writers there are who have done great service in coördinating the somewhat confusing views and teachings of clinical psychologists. Both psycho-pathology and psychotherapy in this country owe a debt to Bernard Hart, whose incisive style presents to the medical profession a well-defined picture of the psychology of insanity and its application to methods of treatment.

Prevention of disease which is one of the chief aims of medicine will as regards mental disorders be augmented by the lessons of the new psychology. The after-care of patients discharged from mental hospitals is receiving close attention. Thirty years ago the investigation of child psychology was in its infancy. Among other developments the organised tests for intelligence have reached a high standard. The last 15 years have seen great progress in the investigation, care, and treatment of defectives of all grades, though more remains to be done. The teaching that the foundation of neuroses or psychoses can be laid in the first few years of a child's existence is one which requires earnest consideration. The ignorance of the public concerning mental hygiene is still a serious matter, and the spread of education in such knowledge is of the utmost importance to the coming generation.

General Paralysis.

I return to the consideration of brain pathology; the study of general paralysis best illustrates the progress that has been made. It is hard to realise that when my student days were over, the pathology of general paralysis was not yet understood. The disease was mostly attributed to sexual and alcoholic excesses. Some authorities described the paralytic diathesis and maintained that paretics were "born not made." Clouston at one time even used to say that paresis was a certificate of general intelligence. Yet the specific origin of the disease was suspected as far back as 1857. I regard the elucidation of the pathology of general paralysis as the greatest step that has been made in cerebral pathology in my generation, for not only has the establishment of the spirochæte as the cause of paresis definitely cleared up an old problem, but the work has opened up many new questions. As is almost the rule in scientific progress, the answer to one query raises a host of others. Why should paresis only occur in a small percentage of syphilitics? What is the meaning of the long latent period between infection and the onset of symptoms? Is another factor beside the spirochæte necessary to produce the clinical entity we know as general paralysis? Or is there a special strain of the organism responsible for the disease? It is not yet definitely known, indeed, how the organism invades the brain, nor why the application of arsenical compounds is so disappointing when applied to nervous syphilis. One cannot leave this absorbing chapter in mental pathology without mentioning the work of Sir Frederick Mott. He taught the specific origin of paresis with a persistence and insight that were fully justified by the demonstration of the organism in the brain of a sufferer by Noguchi in 1911. We have gained increasing assistance in the diagnosis of the forms of syphilis of the nervous system during the last 25 years. Wassermann has given us a test, which, if properly carried out, enables the presence of syphilis to be determined with certainty. The new knowledge of the composition of the cerebro-spinal fluid, and its behaviour in the presence of various infections, has been of inestimable value. General paralysis was always regarded as a hopeless disease, although I believe that energetic treatment by mercury and the more recent arsenical compounds invariably influenced the course of the disorder. Of late years the malarial treatment has introduced new hope for the victim of paresis. Men are now living comparatively normal lives who were so treated a few years ago. It seems definitely established that the method applied to suitable patients gives the best chance of improvement or even recovery that medicine has yet been able to offer. Looking back over 30 and more years and recalling the uncertain pathology of the disease, its subjects for the most part untreated until the inevitable end in institutions all over the world, there is no more dramatic instance of progressive triumphs in psychiatry in which clinicians and laboratory workers have happily shared.

Progress in Clinical Conceptions.

Noteworthy progress has been made in the improvement of our clinical conceptions; older views have been attacked, new and sound entities established. Korsakow's description of the alcoholic psycho-polyneuritis was being made known over here when I first studied the literature. The syndrome has stood the test of time. It is now becoming uncommon, but appears at intervals and was associated with arsenic in a medico-legal case of importance which occurred a few years back. Of all those writers who have taken part in the advances of clinical psychiatry, Prof. Kraepelin, of Munich, has perhaps claims to the premier position. He has given us the conception of the manic-depressive psychosis, and has defined the conditions now grouped under the term dementia præcox. His writings are models of close observation and description. Not only do we owe to him new clinical ideas, but he has done much to produce our existing system of classification. Moreover, he has re-educated us in the importance of the longitudinal section in psychiatry, by his insistence on the careful study of the life-history of mental cases.

Clinical conceptions are becoming once more in a state of fluidity. Increasing difficulty is being experienced in placing a patient in any definite category. The puerperium, the climacterium, and the senium are being dethroned as specific factors in producing insanity. More satisfactory ætiological foundations

are being formed for confusional states. One of the chief difficulties of clinical description is the diversity of meanings attached to the same terms when used in different countries. An early standardisation of our nomenclature is desirable, and would mark a step forward in the psychiatric progress of the world.

PROGRESS IN THE CARE AND TREATMENT OF THE INSANE.

Both care and treatment of patients have received unremitting attention during my experience of psychiatry, and I think that in some respects care has outstripped progress in treatment. As regards institutions for private patients, in many of them not only have fabric and equipment been brought up to date, but the treatment aspect is paramount and the element of detention is receding as is illustrated by the increase of voluntary admissions. Up to the time of the 1890 Act and even afterwards, there was great activity in building rate-supported institutions, some of which reached an immense size. Of later years there has been a return to smaller hospitals, and this is desirable on many grounds. Those of you who can look back on the asylums of 35 years ago will probably agree with me that the most striking change on entering a large institution to-day is the comparative absence of noise in and about the buildings. When I first became familiar with mental hospitals I was much impressed by the restless excitement that prevailed, the shouting, singing, and constant chatter of conversation. All that has changed and the quietude even where large numbers are resident is in itself a testimonial to the way in which the gradual hospitalisation of our mental institutions is taking place. I believe that one of the chief factors responsible for this change from noise to peace has been the withdrawal of beer from the diets of our patients. Also the steady diminution of acute and chronic alcoholic insanities from the wards of our institutions during the term of my practice has been remarkable. Alcohol was an exciting or predisposing factor in at least 23 per cent. of cases admitted to asylums round about 1890. This figure had fallen to less than half in 1920.

I can recall many improvements in the administration of large hospitals. All of us have gladly seen the last of the old term "Pauper Lunatic Asylum." Rate-aided patients are better clothed, and their dresses and suits are less like uniforms than they were. Provision for occupation, both in and out of doors is more generous, and work is often rewarded with some local currency with which patients may make simple purchases in a shop or store provided for the purpose. Contact with the outer world is maintained more completely, by newspapers, wireless, and an increasing system of leave and parole. Cases are separated into categories as far as that is possible, and few institutions are now without a reception ward or wards for each sex, even if a separate building is not available for the recent cases.

Another necessary change for the better in the care aspect of our patients has been the improvement in the dietary scales. There is, in my opinion, a close connexion between diet and the occurrence of those preventable maladies, tuberculosis and dysentery, which were endemic in many large institutions. The high incidence of tuberculosis caused great concern between 1890 and 1900, and one often heard that all mental hospitals should build adequate open-air wards for the isolation and treatment of cases which were bound to occur. Much argument was forthcoming concerning the statistics of tuberculosis cases occurring in mental hospitals as compared with its appearance in the general population. Some authorities maintained that it was ten times as high in asylums as in the sane community. While this figure may be too severe, there is no doubt that tuberculosis was very prevalent in institutions for the care of the insane. Deaths from tuberculosis, indeed, in mental hospitals rose to alarming proportions during the war, when diets were necessarily cut down to a minimum. What used to be known as "asylum dysentery" is a phenomenon of great interest and its causation and proper treatment has now been accurately determined. It is noteworthy that deaths from tuberculosis or dysentery are very rare in registered hospitals. In licensed houses, where the meals closely resemble those enjoyed by the middle and upper classes, cases of either disease are practically unknown. It would seem as if these two scourges tend to decrease as the standard of living improves. Much attention used to be paid to caloric values, and it may well be that some of the scales of diet have lacked those elements known as vitamins which we have learned are essential to a state of good health, and consequently a high resistance. Dietary scales, it is satisfactory to record, have been much improved of late, and it will be interesting and instructive to observe the effects on the incidence of dysentery and tuberculosis, as well as on the recovery rate.

Coincident with the growth of the hospital idea we find the slowly developing practice of employing female nurses for male patients. This has had excellent results, but is still in a somewhat experimental stage, and I do not believe that the good male nurse will ever entirely disappear. The progress in the standard of nursing in mental hospitals can best be described as amazing. The Royal Medico-Psychological Association must be given much of the credit for this work. The syllabus of training and examinations for the proficiency certificate in mental nursing was commenced 35 years ago. The official handbook has grown in size with successive editions, and the seventh and latest, published in 1923, is a most informative and complete guide to nurses, and might well be studied by practitioners and students. General as well as special training is being insisted upon, and the formation of a State Register on which mental nurses may be included is a step in the right direction. Rates of pay and hours of work have been improved, until there is a danger of professional nurses losing sight of the nature of their calling, and regarding their hours of labour as so much routine, which true nursing can never be. I believe that the arduous training now necessary for nurses to qualify will remove entirely such tendencies, and that interest in the work will be essential if a nurse is to pass the necessary examinations.

There is one excellent movement which I have seen developing, and which is likely to become more general. I refer to occupational therapy. It is true that patients have been employed in workshops, laundries, and farms, where they have been largely engaged in routine work, often of a lowly nature. But occupational therapy is meant to inform, to recreate, and re-educate. We owe a good deal to American practice for this aspect of treatment. Not only is occupation of great value in convalescent states, but terminal dementia may be held off for many years if some regular occupational interest be provided. Instructors are necessary, and a great variety of work can be made available. At the Bloomingdale Hospital, New York State, 80 per cent. of the patients take up some daily task during their residence. Some American hospitals have adopted physical training classes, conducted by a resident instructor who may have a gymnasium at his or her disposal. Pioneer work of this kind is now being carried out in this country, and I hope the system will take its place in the equipment of all our large hospitals.

Progress in treatment must ultimately result from research and advances that are made in other branches of science. The whole of the past 35 years has been marked by a slow but increasing equipment in laboratories and devoted laboratory workers. In this psychiatry owes a debt to the London County Council, who established the central laboratory at Claybury 35 years ago, now moved to Denmark Hill. While London may rightly be considered the centre of psychiatric research, much activity has been shown by workers scattered throughout Britain. I recall the labours of Bevan Lewis at Wakefield, the

patient investigations of Ford Robertson in Scotland, and the stimulating centre at Cardiff under the energetic direction of Edwin Goodall. It is to be hoped that these examples may be followed by Birmingham and other places. Some of the older methods of therapy have gone. The heroic treatment of excitement by the administration of croton oil or the cold shower was an occasional practice in my early days. The development of the continuous bath has done much to solve the problem that acute excitement presented to psychiatrists, though there is nothing new in hydrotherapy. The application of endocrine extracts has proved disappointing, though I feel that it is pregnant with possibilities, and increased knowledge may show us more effective and accurate methods of applying endocrine principles. Thyroid extracts have been extensively tried as a means of inducing artificial illness, based on the common observation that morbid mental states are often improved after some intercurrent disease has run its course. Other preparations have been used to produce the same result. Such methods resemble "firing into the brown," the resort of the desperate sportsman. Yet they are fully justified should a patient show the signs of chronicity, and sometimes these measures succeed. In England bed treatment for acute conditions has gained ground. Few psychiatrists would have kept an acute melancholic in bed 30 years ago. The value of bed treatment has been fully established, and I think the same may be said of the open-air methods which are now almost universally practised and approved. The padded room is disappearing, together with the various appliances for mechanical restraint. The nightly dose of hyoscine is becoming a thing of the past, and the use of sedative drugs has been limited and improved, and is better understood.

To-day we find the subject of treatment approached from two widely different angles. Two schools are striving for the ascendancy. The psychological school labours to prove the worth of psychotherapy, in which school psycho-analysis makes the widest claims. The other viewpoint is taken up by what I may call the toxic school, searching for hidden sources of infection, and in their turn making large claims and producing results which cannot be ignored. Among many workers, Henry A. Cotton, the Director of the State Hospital at Trenton, New Jersey, has made a long series of carefully recorded investigations and results of treatment. The conclusion of this school is that the presence of chronic infection is the primary cause in many conditions of mental disorder, and it regards environment and psychogenic factors as secondary ætiological agents precipitating disease. The field of investigation involves routine examinations of the blood, teeth, tonsils, stomach, colon, rectum, cervix, seminal vesicles, and accessory sinuses. At my own hospital I am privileged to see the epoch-making work of my colleague, Sir Almroth Wright, and his enthusiastic assistants, the pioneers of vaccine therapy which is slowly extending to psychiatry.

The contest between the psychogenic and physiogenic schools might well end in a happy division of the territory they dispute, and an admission that much of the clinical field should be held in common. As infections may be causes in the production of mental disorders so also psychological factors may lower the resistance of the individual to bodily disease.

Recent advances in medicine are imposing a call for increasing knowledge and skill in the younger generation of psychiatrists. The wide gap which existed between the psychiatrist and the general physician has been rapidly lessened. Studies in basal metabolism, blood-sugar reactions, the tests of renal, hepatic, and pancreatic functions have important bearings on the future progress of treatment in psychiatry. New fields are opened up by the cutaneous protein tests, and the procedure of desensitisation where individual idiosyncrasies to proteins are found to exist. Fertile ground awaits the tiller, and it is open to us to reap an abundant harvest. While the labourers are still all too few, the enthusiasm of the younger workers should enable them to meet the demands that are likely to be made upon them.

THE TEACHING OF PSYCHIATRY.

It becomes increasingly clear that the teaching of psychiatry and psychology is of immense importance if we are to maintain the progress that the science is making. The medical practitioner still commences his professional life with a scanty knowledge of the mind in health and disease, a state of affairs which requires amendment.

But it is a pleasant task for me to recall the advancement that has been made in my time in the status and education of those medical men who enter the service of our mental hospitals. I have already referred to the bewilderment and confusion that overwhelmed the young doctor who entered psychiatric practice when I first became qualified. At that time an assistant medical officer was largely engaged in clinical routine work of dispiriting kind. He was often forbidden to marry, even were he able to support a wife and family. Little wonder that deterioration from this and other causes was sometimes sadly evident. All this has been changed by the steady pressure of enlightened opinion. Pay and promotion is much more adequate, pension funds established, and marriage is possible for several members of the staff of a large hospital. Original research is encouraged. Study leave is granted, and the possession of a diploma or degree in psychological medicine will no doubt become compulsory for those who seek promotion to higher appointments.

The teaching of psychiatry in medical schools has made decided progress. Our University of London has always held out a helping hand to medical psychology. Originally it required every candidate for the higher degrees in medicine and surgery to pass an examination in logic and psychology. This continued until some years ago when a paper on Mental Physiology was substituted for the previous hybrid. This paper was only discontinued, some of us think unwisely, when psychological medicine was selected as one of the special subjects for the M.D. degree. Lately the diploma for proficiency in mental disorders or mental deficiency has been established by London, as well as most other universities, and by the Royal Colleges. During my training students rarely came into contact with mental cases. Now, every school has a lecturer on psychiatry, who is usually on the staff of the hospital, and has an out-patient department which the student can attend. There he gains some insight into early cases, psychoneurotics and defectives, many of whom find their way to the department for treatment and teaching purposes. In addition, he must attend at least eight clinical demonstrations at a recognised mental hospital. Many consider this tuition to be insufficient, but in view of the crowded state of the medical curriculum we are told that it is all that can at present be reasonably expected. Speaking generally, I find students much interested in medical psychology, and when qualified they are now much better able to deal with the mental cases they may meet than were their predecessors. The general public shows an increasing interest in psychology, and the subject should, if possible, become a more prominent feature of medical education.

THE CLINIC.

Much has been written and spoken concerning the establishment of clinics for the treatment of mental disorder, by which it is hoped to supplant the existing mental hospitals, or at any rate to provide accessories to what has been called "custodial care and treatment." This need I believe to have arisen largely owing to the failure of existing legislation. It is unfortunately true that for no less than 87 per cent. of patients who are certified there has never been any opportunity for voluntary residential treatment. The development of clinics for the care of both in- and out-patients without legal procedure will do

much to speed up early treatment in psychiatry. A parallel movement is the desire of many to obtain powers to allow voluntary patients to enter rate-aided institutions. Both proposals deserve whole-hearted support. The clinics will help to bring our specialty into closer touch with general medicine, and existing mental hospitals will increase their hospital character and lose the invariable element of detention which so diminishes their prestige and value.

The opening of the Maudsley Hospital on the lines of the suggested clinic marks a fresh era in psychiatry in this country, and is a fitting memorial to one of our greatest teachers. The contemplated move of the Bethlem Royal Hospital is a matter for regret to many of us who owe so much to that premier teaching hospital. Bethlem has for years been a shining example of the hospital principle in psychiatry. The large proportion of voluntary patients received there speaks for itself. There is no reason why many institutions should not reproduce the fine work done by Bethlem were suitable changes in the law obtained.

A PLEA.

Recovery rates are often said to be low in psychiatry as compared with other branches of medicine. The last return of the Board of Control shows a recovery rate of 34·8 per cent. and discharge rate of 53·5 per cent. of the direct admissions of certified patients. Recent inquiries concerning the fate of 1000 consecutive admissions to an American mental hospital show that 26 per cent. recovered and remained well, while a further 14 per cent. improved sufficiently to return to their homes. I believe that such figures would compare favourably with the same number of patients admitted to a general hospital. An afternoon spent in the out-patient departments of a large general hospital reveals a high incidence of chronic disease. I am concerned for the future of those patients admitted to mental hospitals who do not proceed to recovery. The view that is tacitly, if not expressly, formulated by many who are keenly interested in the welfare of early treatment, that the unfortunates termed "chronic" should be segregated in separate buildings, anywhere and anyhow, with the minimum of medical care, is in my view a return to the inhuman methods of the past. Experience in registered hospitals and licensed houses teaches that the presence of voluntary patients has a beneficial effect on many of those who are detained on a judicial order. It is rare, in my experience, to find most recent cases, voluntary or otherwise, to be adversely affected by mixing with selected certified fellow patients. When I recall how I have been deceived by an appearance of chronicity in a patient who has ultimately made a good recovery, I am constrained to place on record this plea for the case that we term chronic.

PSYCHIATRY AND THE LAW.

A recent and hopeful sign of progress that ought not to be overlooked is the requirement of a knowledge of psychiatry by all doctors seeking appointments to the prison medical service. The detection of insanity in prisoners under remand, or when first sentenced, is often a matter of difficulty. A tribute is due to the prison medical officers for the advances they have made in the diagnosis of mental disorder or defect among the prisoners under their charge.

Criminology is making considerable advance, and many important changes have taken place in prison methods during my generation. I will only make reference to one relevant topic which concerns us as psychiatrists—the criminal responsibility of the insane. The professions of law and medicine are still unable to see eye to eye on this important subject. The legal mind appears to be bound by tradition and still clings to the McNaghten rules, which our own profession for the most part considers antiquated and unjust. Defect of reason should not be the sole and governing factor in establishing irresponsibility for crime. The recent Atkin report does not satisfy us, for the continuance of these rules hampers the medical witness in his replies, and frequently prevents him from making his evidence consonant with his convictions. It would almost seem as if our legal administrators were distrustful of medical evidence relating to matters in which criminal responsibility is involved, even when given by highly qualified authorities. The legal profession appears to fear that the doctrine of psychological determinism might absolve a person from the consequences of his actions. This is an entirely mistaken notion. The tenets of medical men and psychologists do not differ from those of their fellow citizens in regard to the necessity of punitive measures for crime. Only when mental disease amounting to insanity exists is it thought justifiable that the penalties for breaches of the law should be modified. It may be said that such is also the view of the lawyers, but the methods by which the criterion of insanity is to be established in criminal cases do not meet with our approval, and are not abreast of modern knowledge.

I have no space to dwell upon other differences we have with our brethren of the law. Legal change is slow, and we are undoubtedly hindered in our work by existing legislation. Admission to a mental hospital still involves cumbersome legal machinery, which should be simplified. We have welcomed the appointment of the Royal Commission, and it is to be hoped that real progress may result from its labours.

PSYCHIATRY AND THE PUBLIC.

If the relationship of psychiatry to law reflects a lack of progress, what can I say of the public attitude to our branch of medicine. It is disappointing, to use a quite mild expression, to find a leading article in a highly respectable daily journal referring to the devoted men who have laboured for psychiatry in the past as "keepers of madhouses." Such an expression applied to the memories of a Maudsley or a Mercier can only reflect a deplorable ignorance on the part of educated public opinion. A novel has lately appeared, written by a distinguished author, and dealing with the adventures of an elderly psychotic who is finally admitted to a mental hospital. The terms in which the descriptions are written are disquieting and reminiscent of the past. Prejudice and unfamiliarity with existing conditions indicate the want of sympathy and understanding shown by a section of the general public to the psychiatric physician and his work. Yet both articles and novels, hostile though they be in some respects, are portents of a growing public concern for the welfare of the insane. This interest is, in my view, the main contribution that the Great War has given to psychiatry. The neuroses of war added little to the knowledge of the psychiatrist. It may be that something was learnt of the influence of fatigue, exhaustion, and stress upon the mental health of large bodies of men. Something, too, was learnt of the diffuse lesions produced in the nervous system by the effects of severe concussion. But to the public, the appearance in their homes of large numbers of mentally afflicted soldiers was a new thing. The success in treating these war cases has been largely due to the fact that treatment was early, even immediate, and was often dramatic in its results. The deaf were made to hear, the blind to see, and the palsied to walk. Public interest was roused, and has spread to those members of the community who suffer from mental disorder necessitating hospital care. How are they housed and fed? Why are they not cured? Why is their liberty curtailed? What has happened to the doctors? Such are the questions that are being asked, and the public is eager for information.

The first step should be to insist on the fact that insanity is no peculiar horror, no strange plague that strikes down without reason or warning. From the "shell-shocked" soldier to the maniac of popular imagination there is but a difference of degree. Both suffer from mental disorder, and for both there is good hope of amelioration and cure. Destructive criticism is easy, but of little value in shaping the future. We want public coöperation, financial aid

for research, generous contributions to the funds of mental institutions, and, above all, the trust that has been happily given to medical men in every other branch of practice.

And now nothing remains for me but to thank you for your kind attention. To those of you who are about to take up the difficult and sombre study of insanity I would say that the future is bright with hope. In spite of all that has been done, wide tracts of virgin soil still lie before us. Let our interest direct our work, there is a place for all, be it at the bedside or in the laboratory. We shall need patience and tolerance; and if we serve faithfully the needs of our patients, continued progress in psychiatry will be assured.

A CASE OF ENCEPHALITIS LETHARGICA OF SEVERE TYPE.

TREATED SUCCESSFULLY BY INJECTIONS OF ELECTRO-COLLOIDAL GOLD AND SILVER.

BY ARTHUR W. FULLER, M.D. EDIN.

As a good deal of attention is being given at the present time to encephalitis lethargica and its treatment, especially by medical officers of health, the following clinical report may be of interest.

The patient, a lady aged 68, after complaining of recurring pain in the right temporal region for a few weeks, had an attack of vertigo in the street; she was brought home and relapsed speedily into a condition of stupor from which, however, she could be aroused. Sir William Willcox was called in consultation, and the diagnosis of encephalitis lethargica was made, with a grave prognosis. The cerebro-spinal fluid, which was examined by Dr. A. B. Porteous, was found to be normal, except for a very slight lymphocytosis, there being no excess of globulin. Cultures were sterile and no T.B. present.

Symptoms and Course of the Disease.

The face was expressionless and mask-like. The mental condition was stuporose alternating with delirium, especially at night. She spoke with great difficulty and hardly above a whisper. There was spasmodic twitching of the face and muscles of the neck, and she complained of pain on the right side of the face and temporal region, also of frontal headache. The antra and nasal sinuses were examined by Sir James Dundas-Grant and found normal. The urine showed a trace of sugar. All the reflexes were present. There was no diplopia, but the ocular movements were performed with difficulty, especially the upward and downward, the horizontal movements being much less impaired; bilateral ptosis was also present. There was great dryness of the throat and deglutition was very slow. The patient lay almost immobile, except for involuntary movements of the right arm and hand resembling those of paralysis agitans.

Third day: The general asthenia was more marked, the stupor increased, and incontinence of urine and fæces supervened. The temperature rose to 102° F. and then dropped in the evening to 100°, with a morning drop to 99°, probably as the result of the fever mixture which was given. The pulse-rate was about 90 per minute and became very small and weak at times, necessitating the administration of small doses of brandy. The left arm was now completely paralysed and she could only move the legs a little and with difficulty.

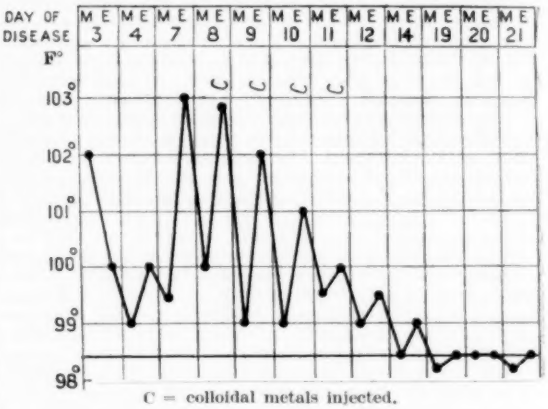
Fifth day: There was considerable erythema on the buttocks and round the hip-joint.

Sixth day: There were increased spasmodic twitchings of the face, eyelids, and right hand and leg, great stiffness of the neck muscles, increased difficulty in articulation and swallowing, and deep stupor, from which it was extremely hard to rouse the patient.

Seventh day: The temperature rose to 103°. It was now almost impossible to rouse the patient, and feeding by the mouth had become quite impossible. The respirations, which had been about 28, suddenly rose to 52 on the eighth day.

There appeared little chance of recovery, but, knowing that electro-colloidal metals, particularly colloids of silver and a combination of silver and gold, had been employed successfully in the treatment of general infections, I decided to give an intravenous injection of 0·05 per cent. suspension of gold-silver colloid. The first result was a return to consciousness within an hour, the temperature dropped one degree, the respirations became 36 per minute instead of 52, and the pulse, which had been 140, fell to 120.

Next day the temperature rose again to 102° at 10 P.M. when another intravenous injection was given. After this the temperature commenced to fall steadily, and at 2 P.M. the following day it was 99°. There was a marked improvement both in swallowing and in articulation, and the patient was much more easily aroused. The maximum temperature at night was now only 101°. Two more injections were given



C = colloidal metals injected.

on this and the following evening, intramuscularly. They were then suspended altogether for a few days, but the improvement persisted.

On the tenth day the mental condition was markedly better, but there was still incontinence of urine and fæces. The maximum evening temperature was 100°.

On the twelfth day there was some powers of movement in the left arm and hand.

On the fourteenth day her speech was almost normal, albeit a little slow, and she moved her arms and legs more readily, but there was still some nocturnal delirium. The maximum temperature, which had shown a slight improvement each day, was now 99°; the ophthalmoplegia became less marked, the fibrillary muscular movements and twitching of the face and neck muscles subsided, and the power of voluntary movement gradually returned.

On the sixteenth day the silver-gold colloidal injections were resumed daily for four days, as the mental condition was not satisfactory and was not improving pari passu with the other symptoms, for she still had some nocturnal delirium and illusions. The result was marked, for she began to take an interest in her surroundings, to converse intelligently, the delirium at night was less, and the incontinence ceased a few days later. The temperature was now normal at night.

At the end of four weeks the patient could sit up and eat simple ordinary diet. There was still asthenia, but she was gaining strength steadily. At the end of five weeks she was able to walk about her room and her mental condition was nearly normal, her memory being fairly good.

At the end of the sixth week, beyond general debility, there were no abnormal symptoms except that sometimes she complained of sleeplessness and some stiffness of the muscles of the neck.

It is now five *months* since the acute symptoms subsided; there are no abnormal physical or mental signs, and she is resuming her usual social life.

Remarks on Treatment.

Besides the gold-silver injections, which acted like a specific in this case, the great desideratum is good nursing, which happily was available. The stuporose, almost comatose, condition of the patient, the complete incontinence and general utter helplessness, are a heavy tax both on the skill and patience of the nurses. The subsidiary treatments included the use of an ice-bag and various analgesics for the pains in the head, which at times were very severe, antiseptic swabbing of the mouth and the administration, during sleepless and restless periods, of mild hypnotics. But beyond all these in importance is the question of nutrition. In this case rectal feeding never had to be resorted to. Stimulants must be

given occasionally, and both brandy and hypodermic injections of liq. strychninæ ℥v. were administered, when there were signs of collapse, which were not infrequent. Milk, Brand's meat juice, malted milk, coffee, Allenbury's food, Eatan, jellies, &c., were all found useful during the acute stage.

With regard to the colloids, their action is that of a protein stimulant; but, unlike many other stimulants, there appears to be no subsequent depression if given in small enough doses. There is a reaction, of course, but it is a reaction against the disease, similar to that produced by a vaccine, and is not a severe one. Their advantage over vaccines in cases where the specific organism cannot be isolated lies in the fact that they are always ready to hand and can be given at once either as a substitute for, or as a preliminary to, vaccine therapy, and with as good if not better results. It would be interesting to know if the gold-silver colloids have been used before in this country in epidemic encephalitis, for the most gratifying results of their employment in this case has been that the changed mental condition and various types of paralysis so frequently observed as sequelæ have not occurred.

Among other treatments recommended for this disease are intramuscular injections of 4 c.cm. of a 25 per cent. solution of magnesium sulphate (Edwin Matthew, THE LANCET, 1924, i., 1157); intravenous injections of sod. salicylate 1–30 solution have been used with reported good results by Rathery, Gournay, Courcoux, and Maignant. A vaccine has been made from the fixed virus of encephalitis lethargica and improvement from its use has been reported, but the evidence is inconclusive.

The bacteriology of the disease is at present unsatisfactory, but Loewe, Strauss, and Thelhimer have grown an organism resembling that of Flexner in poliomyelitis.

The infectivity is very low and contacts rarely appear to suffer.

The clinical picture is that of a general infection, and the organism is probably a filtering bacillus producing a virus, which has a selective action on the brain and spinal cord by way of the cerebro-spinal fluid, the symptoms varying according to the damage which may result, whether in the meninges, cerebral hemispheres, basal ganglia, pyramidal tracts, &c. The incontinence which is so constant a symptom is mainly due to the lethargy and general stuporose condition.

The after-treatment is the treatment of convalescence, with special reference to abundance of rest and sleep and rigid exclusion of all excitement, the avoidance of strong tonics, and the recognition that the time may be considerable before complete restoration takes place.

A NOTE ON TWO CASES OF CENTRAL PONTINE HÆMORRHAGE.

BY A. MUIR CRAWFORD, M.D., F.R.F.P.S.GLASG.,
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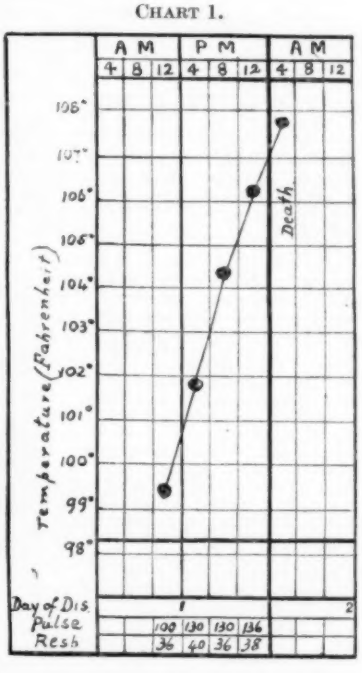
A STUDY of the symptomatology of hæmorrhage into the pons demands, on the part of the clinician, a clear conception of certain anatomical and physiological facts concerning this most important part of the brain. Without entering into an elaborate discussion on the anatomy and physiology of the pons, it will be sufficient in this short article to summarise briefly the essential points to be borne in mind in endeavouring to comprehend the symptomatology of pontine hæmorrhage. (1) The pons varolii lies in close proximity to the medulla, crura cerebri, and cerebellum. (2) It contains motor and sensory tracts coming from and going to the brain, the former passing down through the anterior (ventral) part and the latter passing upwards through the deeper parts. (3) The nuclei of the fifth, sixth, and seventh nerves are placed near the floor of the fourth ventricle, while immediately in front of the pons lies the superficial origin of the third nerve. (4) The basilar artery runs along the grooved anterior surface and gives off transverse branches which supply the pons.

It will be obvious, therefore, that in such a complicated structure the symptomatology of hæmorrhagic lesions must be varied and complex according to the part of the pons involved and the extent of the lesion. Thus in small hæmorrhages there may be no loss of consciousness, while in large hæmorrhages convulsions and early loss of consciousness are notable features, to which may be added the characteristic symptoms of crossed paralysis, conjugate deviation of the eyes and head to the side away from the destructive lesion, contracted pupils and hyperpyrexia. In small unilateral lesions the paralytic phenomena associated with the cranial nerves will vary according to the site of the lesion. Large hæmorrhages are usually central and are characterised by sudden loss of consciousness, bilateral paralysis, contracted pupils and hyperpyrexia. The following two cases are examples of large central hæmorrhage in which these symptoms were well marked. Both cases showed extreme hyperpyrexia immediately before death.

CASE 1.—Male, aged 31 years. Admitted to hospital in the evening of Dec. 21st, 1922, with the history of having suddenly been taken ill while attending a social function. The attack began with an epileptiform convulsion, which was preceded by a feeling of nausea and followed by coma. There was no history of previous epilepsy and no history of kidney trouble. On admission the patient was deeply unconscious. The pupils were moderately contracted and fixed; later on they became pin-point. The conjunctival reflex was absent. The face was of a pale cyanotic hue and the breathing stertorous. He vomited a considerable amount of mucus mixed with some food material. There was extreme rigidity all over, especially on the right side: the smallest stimulus elicited clonic spasm of all four extremities. The knee-jerks were greatly exaggerated with double ankle-clonus and positive Babinski on both sides; the arm jerks were increased. On the following morning he was deeply comatose, the reflexes generally were abolished, and the pupils pin-point and immobile. The urine contained a trace of albumin, but no blood, and tube casts were not found. Systolic blood pressure was 190 mm. The patient died about 27 hours after the onset of the illness. The temperature having steadily risen, reached 107·8° F. just before death (Chart 1).

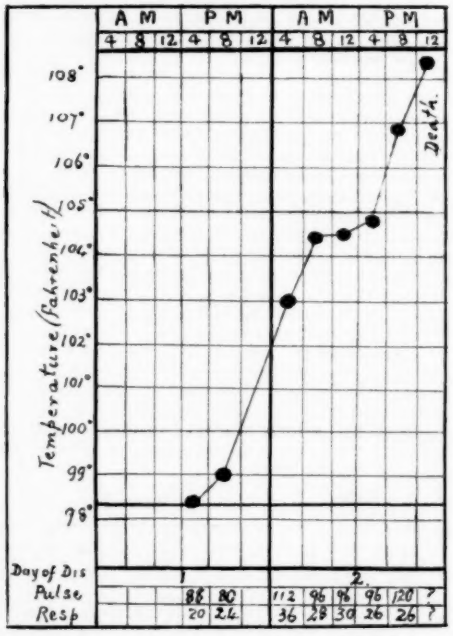
CHART 1.



The autopsy showed a large central hæmorrhage into the pons, bursting through on its inferior surface on the right side. A small amount of blood had effused into the basal cisternæ. The kidneys showed the changes of chronic interstitial nephritis with some cloudy swelling. The heart showed enlargement of the left ventricle, marked recent atheroma of the aorta, and thickening of the valves.

CASE 2.—Female, aged 51 years. This patient became suddenly ill about midday on Jan. 4th, 1925, and was admitted to hospital an hour later. It was ascertained

CHART 2.



that she had been out of sorts for two months with "nervous trouble." The present illness began with vomiting, inability to stand or speak, and the early onset of unconsciousness. On admission the patient was comatose. There was rigidity of the arms and legs and the pupils were contracted and equal. An hour later the right arm was becoming flaccid and there were signs of right-sided facial palsy. The left arm and both lower limbs were still rigid, with much exaggerated knee-jerks and positive Babinski. The head and eyes were turned to the left. Next day the head was kept to the right side. The heart showed signs of hypertrophy. Systolic blood pressure 180 mm. The urine contained a moderate amount of albumin, but casts could not be found. Death occurred 35 hours after the onset of the illness and was preceded by a temperature of 108·4° F. (Chart 2).

The autopsy showed extensive hæmorrhage involving the pons about its centre. The hæmorrhage had burst into the fourth ventricle and blood was present in the whole ventricular system. The cerebral arteries were very brittle and showed signs of atheroma. The kidneys showed slight interstitial changes with a notable sclerosis of the renal vessels. There was considerable hypertrophy of the heart, especially of the left ventricle; the aorta showed patches of atheroma.

For permission to publish notes on these two cases I am indebted to DR. J. B. MACKENZIE ANDERSON, into whose wards the patients were admitted.

TUBERCULOSIS VERRUCOSA TREATED BY ULTRA-VIOLET RADIATION

AND ASSOCIATED WITH UNSUSPECTED TRICHINOSIS.

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AND

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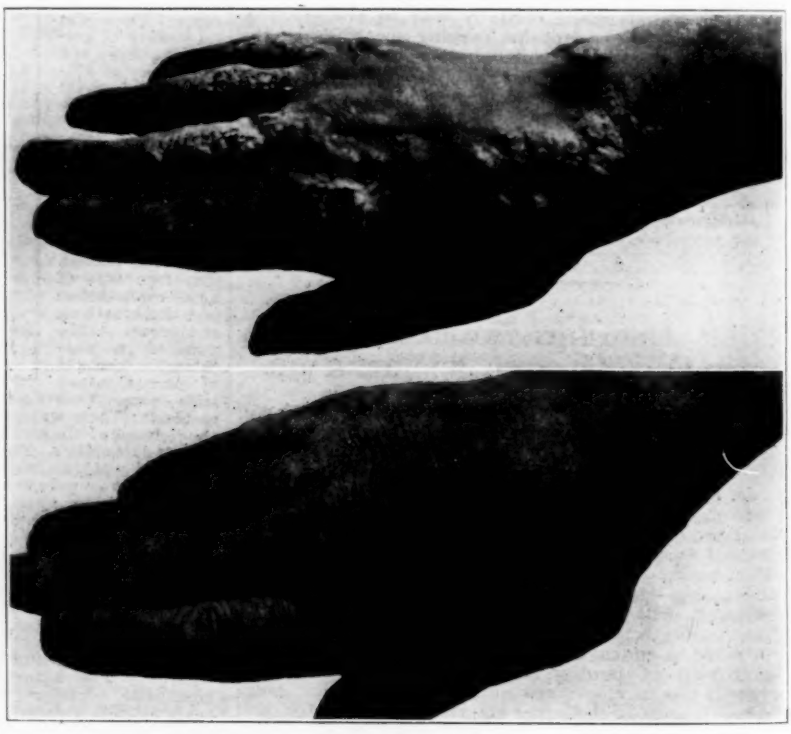
THERE are a number of interesting facts in connexion with this case which seem to justify its publication.

Pensioner D., aged 53, was admitted to the Queen's Hospital complaining of chest trouble.

History.—He served with the colours in Africa from 1891 to 1902, during which time he does not appear to have suffered from any serious illness. In 1914 he re-enlisted but was discharged the same year. In 1915 he re-enlisted and was sent to France, but he was sent home the same year and discharged on account of ulceration of the rectum. In 1917 he again re-enlisted and was again discharged for ulceration of rectum and old fistula. Not disheartened by his frequent discharges he again enlisted in 1919, this time in the Exhumation Corps. While in France he contracted chest trouble (chronic bronchitis). He also states that while exhuming a body he scratched his right hand; within a fortnight the skin became swollen and several warts appeared at the site of the scratch. These were cauterised at a dressing station, but the warts continued to spread up the arm and he was discharged owing to his chest condition and the condition of the arm. His record card shows that the diagnosis verruca necrogenica was made in 1921 and that he was then being treated with liq. acid. nitrat. of mercury.

FIG. 1.



Tuberculosis Verrucosa: A, Before treatment; B After treatment.

The patient's story is that the arm condition has been continually treated without benefit since his discharge in 1919.

On admission the physical signs and a radiogram of his chest showed that he was suffering from chronic pulmonary tuberculosis. Although frequent examination of his sputum was negative, when inoculated into a guinea-pig a positive result was obtained. The complement-fixation test for tubercle was also strongly positive, the Wassermann reaction negative.

FIG. 2.

A, Before treatment. B, After treatment.

From his history and the record of his physical signs it is very probable that even in 1919 the chest trouble was pulmonary tuberculosis, the diagnosis not being made owing to chronic bronchitis masking the condition. The skin of the dorsal aspect of the fingers and right hand, and of the forearm, on its ventral aspect, was indurated and in places warty and ulcerated. There was also a patch on the medial aspect of the arm (Figs. 1 (A) and 2 (A)). Microscopically no particular organism was discovered; cultures were negative and a guinea-pig inoculation with pus from the ulcer proved negative also. In spite of these findings the condition was regarded as tuberculosis verrucosa, the source of infection being either the patient's sputum or the body he was exhuming at the time he scratched his hand. Dr. H. G. Semon, dermatologist to the Ministry of Pensions, to whom the case was sent for an opinion, concurred with this diagnosis.

Treatment.—The arm was cleaned up with hot fomentations and ultra-violet exposures were started; local treatment was given with a mercury-vapour lamp and general radiation to the whole body with a Westminster lamp (30 amps. white flame). The general radiation dose was started with 5 minutes at 4 feet, the patient being placed between two arcs, each 4 feet from the body. This dose was increased to 20 minutes daily. The danger of hæmoptysis in the treatment of pulmonary tuberculosis with ultra-violet radiation has been stressed in the literature dealing with the subject. Admittedly great caution is called for; but this patient's chest condition was not regarded as a contra-indication to general ultra-violet radiation.

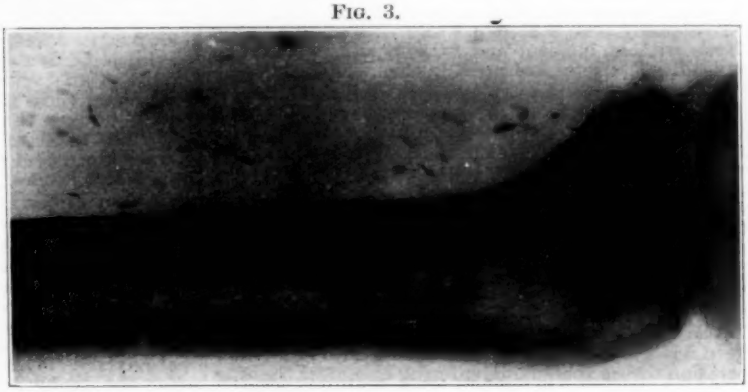
The local treatment was at first given with the Hanovia Alpine Sun lamp, 4 areas being treated daily and the dose to each area being increased from 4 minutes at 18 inches to 10 minutes at 9 inches. The areas showing more extensive and dense induration were treated with the Kromayer lamp, using the 5 mm. uviol blue water-cooled filter, the starting dose being 5 minutes and increasing to 15 minutes in contact. This filter cuts off rays shorter than about 3000 Å. (A 3-minute exposure under these conditions on healthy skin will give between a second and third degree erythema resulting in pigmentation which will persist for a number of months, in some cases six months or longer.)

Each area received an exposure every three to four days. The condition rapidly improved (Figs. 1 (B) and 2 (B)), and according to the patient it is now better than it has been during the last six years. The treatment could have been pushed more rapidly—that is, more areas could have been treated each day—but for the heavy demand on the Kromayer lamp.

The hand was X rayed for underlying disease of the bones, the patient giving a history of a fractured thumb. There was no tuberculous disease evident, but unusual oval-shaped calcareous nodules were found in the muscles, suggesting trichinosis. The lower limbs, consequently, were also radiographed and similar nodules were shown (Fig. 3).

The patient has been questioned in the hope of discovering the probable date of infection with the *Trichinella spiralis*. He denies ever having eaten raw pork, but the infection may have come from sausages.[1] There is no history of any of the symptoms usually associated with the condition[2]—intense catarrhal inflammation in the intestinal canal, and symptoms which may suggest cholera or dysentery and may be associated with hyperpyrexia; rheumatic muscular pains when the embryos begin to wander from the intestinal mucosa via the lymph channels and blood stream to the striated muscles—nor does he complain of any muscular pains at present. From the amount of calcareous infiltration, the lack of eosinophilia (the eosinophil count is only 1 per cent.), and the absence of cysts in the stools, it would appear that this is an old-standing case. The encysted trichinæ may remain alive as long as 20 years before they become calcified and the embryos die.[3] It is owing

FIG. 3.



Radiograph of leg showing parasites.

[1] Castellani and Chalmers: Manual of Tropical Medicine, third edition, p. 676.
[2] Manson-Bahr: Manson's Tropical Diseases, eighth edition, p. 731.
[3] Stitt: Practical Bacteriology, Blood Work, Parasitology, fifth edition, p. 357.

to this unusual absence of all symptoms that the condition was only diagnosed by radiography. Without dissecting out one of the cysts it is not possible to be absolutely certain of the diagnosis, but the radiographic appearance suggests the presence of some calcified parasite, and, as far as we know, cannot be accounted for otherwise.

A NOTE ON THE TREATMENT OF VARICOSE VEINS BY INJECTION.

BASED ON FOURTEEN MONTHS' EXPERIENCE.

BY SIR SIDNEY ALEXANDER, M.D. LOND.

THIS method of treating varicose veins was devised by Prof. Sicard and Prof. J. Paraf, of Paris, largely as the result of their observations during the war, when they noticed that thickening and obliteration of the veins occurred in the course of treatment by the intravenous injection of certain novo-arsenical products. I am indebted to Prof. Paraf for his personal explanation and demonstration of the methods adopted later on for the express purpose of procuring this "phlebo-sclerosant" result.

Investigation showed that this obliteration of the veins is due to an excess of soda in the solution, and did not occur when absolutely neutral solutions were used. This observation led to the use of carbonate of soda solutions in the hope that they would produce the desired effect and yet not be toxic to the patient. After successfully using a solution of carbonate of soda, Paraf and Sicard found that, although it was efficient as a sclerosing agent, it was too caustic to the perivenal and subcutaneous tissues, in view of the possibility of oozing from the veins or an error of needling. They therefore tried other substances, including chloride of calcium, and hyposulphite of soda, finally settling on salicylate of soda in solutions of 20 per cent., 30 per cent. and 40 per cent. The salicylate was found effective in producing obliteration of the vein; it was not caustic to surrounding tissues, nor toxic to the patient. (Indeed, as I have found, it is actually beneficial where arthritis and other "rheumatic" troubles are present, as is often the case.) Even with salicylate, in poorly nourished tissues, should an oozing occur, there may very occasionally arise a limited "scar"; but this slowly heals without incident and without any tendency to spread. The veins are cured in the meanwhile.

In cases where the varicose veins are accompanied by varicose ulcers—especially where there is any reason to suspect syphilis—a 1 per cent. solution of biniodide of mercury and iodide and chloride of soda in distilled water may be used. This is quite effective, but has the disadvantage of being toxic, and can therefore only be administered in small doses. The consequence is, of course, that the treatment is very much prolonged; if pushed it may produce the usual reaction in the gums and elsewhere. Where varicose ulcers exist, I combine the injection method with the administration of parathyroid and calcium.

The intravenous injection of salts of quinine has been tried by Genevrier, but Sicard and Paraf had occasion to use these largely during and after the war in the treatment of malarial cases and found these salts much too caustic for use in the treatment of varicose veins.

Having practised, since May, 1925, the method perfected by Sicard and Paraf, I have effected the cure of some 100 cases of varicose veins, notes of which I have made. These cases include several which had previously been subjected to excision of the veins—even twice—and in which the condition had recurred. They also include many in which the patient, on account of the extent and distribution of the varicose condition, had been told that it was inadvisable to have the veins excised.

One such was a remarkable case in which there was varicosity of the saphena magna, saphena parva, and accessory saphena of both legs, the superficial circumflex iliac and the superficial epigastric up to the diaphragm, the vena dorsalis penis, and the venæ pudendæ externæ of both sides. There was some œdema of the legs. Having satisfied myself that there was no obstruction of the deep veins, I started the treatment and had the satisfaction of curing all the veins; the œdema of the legs completely disappeared. During the whole time of treatment the patient, who is a gardener, kept at work; and indeed he worked with more ease and less fatigue during the progress of the cure than before.

It is advisable to start the treatment with an injection of the 20 per cent. solution in order to test the reaction of the patient. Sometimes slight faintness is noticed, but this quickly passes off and seldom occurs after the first injection; it is purely emotional in origin. No general reaction occurs and there is no subsequent febrile disturbance. On injection of the solution into the vein there is often a quite sudden constriction of the vein for a few inches, and in a large vein the convexity may become concave, "like a gutter," sometimes the skin in the vicinity of the injection shows "goose skin" over a small area. The injection may be followed by some cramp in the foot and calf, but this is always supportable and lasts only three or four minutes or less.

Of later effects there is really only one—and this is local. It is what Sicard and Paraf call "endo-veinite," but as there is no febrile disturbance I should prefer not to use a term ending in "itis," which denotes inflammation. Instead the condition may be described as chemosis of the intima which suggests acute congestion of the vein. This may be sufficient to cause the opposing walls of the vein to meet and adhere and so obliterate the lumen. A solution of salicylate of soda does not, of course, cause coagulation—indeed, in vitro it restrains clotting; but it has been shown by examination of portions of veins removed after treatment by this method that a thrombus, which forms firm and intimate adhesions to the walls of the vein, may form and become organised into a fibrous cord. No movement of this organising thrombus has ever been recorded, although the method has been practised since 1916, and I think we may be satisfied that no embolism ever occurs except in phlebitis with septicæmia, with which this treatment is, of course, not associated.

A further effect, coming on three or four days after the injection, is a slight reddening of the skin along the course of the vein treated, with some swelling and slight tenderness to the touch. These are good signs and show that the treatment is succeeding. Should the patient wish to do something for this tenderness, a simple warm fomentation affords relief to the slight pain which occurs.

The first injection is followed up a week later by injecting the 30 per cent. solution, and, later on, if necessary, 40 per cent. solution.

It is singular that so little attention seems to have been paid in England to the literature of this interesting and gratifying method, for accounts have been published in many journals.[1] Of about a hundred cases that I have cured, only one has given me any real anxiety. This was a case in which, three weeks after the saphena magna from foot to fossa ovalis was cured, the patient developed fever (102·2°) and rigors.

The history of the case showed that this patient had since about 1910 been subject to occasional shivering

[1] Gazette des Hôpitaux, 1922; The Jour. Méd. Franc., 1921; Marseille Méd., 1920; Congrès de Médecin, 1922; Presse Méd., 1922; Monde Méd., 1922; Soc. Méd. du 9 arr., 1921; Bulletin Méd., 1921; Soc. de Biol., 1921; Soc. de Pédiat., 1922; Sicard, Paraf, and Forestier, 1921; Jour. de Therap., 1923 (Sicard); New York State Journal, 1925. (This last deals with the pathology of varicose veins.)

fits lasting two or three days, the cause of which had remained undiagnosed because he did not consult a doctor. A bacteriological examination showed *B. coli* invasion, and his own doctor assures me that he does not consider the febrile attack to have been caused by the injections.

Scarring that sometimes occurs at the point of injection heals slowly but certainly. It can be altogether avoided by strict attention to every point of the technique. I am often asked if recurrences occur. So far I have not seen any, but Sicard and Paraf with their longer experience say that "after two or three years a small number of patients return asking for more injections, as another vein—at a distance from that previously treated—has appeared," the facility with which these can also be cured being realised by the patient. In conclusion, I may confidently say that in this method of treatment we have a means of curing the patient without laying him up or interfering with his business engagements or usual habits. It is almost painless; and even those who complain of some pain are quite anxious towards the end of the treatment that no vein should be left untouched. With due attention to all the proper technique, it is quite innocuous and most gratifying to the patient.

I again acknowledge my indebtedness to Prof. Paraf for initiating me into his technique and allowing me to make use of his investigations and experience.

Welbeck-street, W.

Medical Societies.

ROYAL MEDICO-PSYCHOLOGICAL ASSOCIATION.

THE annual meeting of this Association took place at the British Medical Association House, Tavistock-square, London, on July 13th to 16th, under the new President, Lieut.-Colonel J. R. LORD. At the conclusion of the business meeting, at which tributes were paid to the late Sir Frederick Mott, formerly President of the Association,

Dr. G. A. AUDEN read a paper on the

Madness of Ajax as conceived by Sophocles.

Dr. Auden said that in his delineation Sophocles probably had in mind an attack of malaria, and the psychological insight shown argued an actual experience of insanity. The poet was specially associated with the cult of hero-physician. The picture drawn by Sophocles was a masterly presentation of delusional insanity, and the accuracy of it had been praised by many writers.—The PRESIDENT said that Sophocles had appeared to have invested Ajax with attributes which were strongly marked in his own make-up—namely, jealousy and rivalry.

Dr. T. H. HISLOP, Prof. G. M. ROBERTSON, and Dr. H. J. NORMAN also spoke.

In the afternoon Colonel LORD delivered his Presidential Address on the

Clinical Study of Mental Disorders.

He first referred to the fact that the Association had been granted a Royal Charter, which he regarded as a recognition of the work which it had accomplished. In the domain of knowledge, he said, the modern man's criterion was utility rather than culture. The Association was concerned with psychology in its broadest sense; it was now a living science, and the various schools of psychology were being judged according to the way in which they responded to the tests now imposed. He urged the re-establishment of the Research Committee, which should include in its functions that of the definition of psychological terms and the collection and classification of clinical data for the aid of research work particularly, but also for the purposes of psychiatry generally. He would also like to see the needs of junior psychiatrists catered for in the shape of meetings for studying clinical psychiatry. He indicated several ways in which he considered the machinery of the Association could be bettered; and he also had much to say in favour of facilitating more research in the subject under conditions of team-work. There was no sharp division between clinical psychiatry, clinical psychology, and clinical neurology; indeed, he regarded clinical psychology as the link between the other two.

The President proceeded to deal in some detail with the psycho-analytical conceptions of Freud, and the modifications of them held by Jung and Adler, remarking that the clinical psychiatrist nowadays was tending to view his cases more from the point of view of instincts, impulses, motives and wishes, and less from that of reason, judgment, belief, ideas, sensation, and hallucination. He sought to investigate the mind of the patient from its infancy in order to discover the cause of the condition found. The President praised the work of Mott in psycho-pathology; it was true that bodily processes were a sounding-board for mental processes, and vice versa. As to the word "recovery" as applied to mental cases, the President declared that what constituted recovery was indefinable, seeing that it depended on the normal mental make-up of the patient and his environment, which differed in each individual case. Freud's definition of cure was the restoration of productive ability and the capacity for enjoyment. To establish and further develop team-work in public mental hospitals would mean a reorganisation of the work of the medical staff, and the addition to it of specialists and experts in the various departments of medicine. As little as possible of the time of the skilled psychiatrist should be spent on cases of chronic insanity; nurses and other lay officers were now so skilled that they would now take on more responsible work than formerly, and much of the work in connexion with chronic cases could be done by medical men who had not been specially trained as psychiatrists. He set out a carefully elaborated plan of medical organisation for mental hospitals, contending that it afforded a fine opportunity for team-work.

In conclusion, the President said he hoped the time would soon arrive when all mental institutions would be equal before the law. There was a wealth of psychiatric practice in general medicine, and it was not right to regard the former as outside the realm of the latter. In general practice there was great need for the practice of psychiatry, especially in regard to child life, the training of adolescents, and the promotion of better industrial efficiency of adults.

On the motion of Dr. C. HUBERT BOND, seconded by Prof. ROBERTSON, a cordial vote of thanks to the President for his address was carried by acclamation.

Encephalitis Lethargica.

Wednesday morning was devoted to a consideration of this subject, when papers were read by Dr. R. L. MACKENZIE WALLIS and Dr. C. FARRAN-RIDGE.

Dr. Mackenzie Wallis's paper dealt with the subject particularly from the standpoint of hepatic insufficiency, and was the account of a research which was partly experimental and partly clinical. In the disease as transmitted to experimental animals there was, during the acute stages, a rapid increase in the lipase content of the blood—especially so when immunity had developed. There was a striking association of mononuclear activity with the raised lipase content of the blood. When an intensive inoculation of the vaccinia virus had been made into the skin of the rabbit there was a rapid rise in the cholesterol content of the blood—namely, from the normal 0·07 to 0·16 per cent. in eight days. Encephalitis lethargica produced a profound effect on the kidneys, liver, and spleen of the animals, the blood also showing evidence of hepatic inefficiency. Among 40 human

cases of the disease, 25 gave evidence of hepatic derangement; most of the acute cases also showed a raised lipase content and a higher cholesterol content than the normal.

Dr. Farran-Ridge's paper dealt with the clinical manifestations of the disease as he had met with them in practice. He said it was not surprising to see, in cases of encephalitis lethargica, symptoms of various psychoses reproduced, seeing that the epidemic disease might attack any part of the brain. Especially did it mimic the manifestations of dementia præcox.

The Educational Adaptation of the Child.

On Wednesday afternoon members accepted the invitation of Sir George Hume, the chairman of the London County Council, and his colleagues to meet at the County Hall to hear and discuss a paper by one of the medical officers, Dr. F. C. Shrubsall, on Educational Adaptation of the Individual Child. It consisted of a statement of the mechanisms and organisation set up by the L.C.C. to get the best out of every child in the immense area covered by it, and to provide every provision and facility for backward and defective children. The attention necessary to be given to the case of the parents was also stressed, while the children's physique was well looked after.

The whole of Thursday morning was taken up with a debate on

Psycho-Analysis and its Development.

The opening paper was read by Dr. W. A. POTTS. He said there was a mass of past experiences in the mind which could not readily be remembered, and processes went on in it which eluded the observation of the person concerned. The modern psychologist said that the hidden mental processes were in the unconscious or the subconscious mind—i.e., the inaccessible. Freud, when dealing with neurotic and mental conditions, noted that some patients experienced relief and showed improvement when they were encouraged to talk frankly about their anxieties and difficulties, and he proceeded to work out a method of exploring the unconscious mind, which he named psycho-analysis. The method showed to Freud the real motives of unusual and irregular conduct, and he became convinced that the unconscious mind consisted largely of unfortunate experiences in early life, of primitive instincts and desires, many of them sexual in character. Abnormal conduct was often a result of conflict between the conscious and the unconscious, because the demands of the moral code set up resulted in a repression of primitive desires. Freud was convinced that not only a person's dreams, but the events of his whole mental life were due to definite causes, and were not the results of chance. Sex was assigned the first place by this authority among these instincts, but with Freud sex has a wider significance than physical gratification, including such attributes as parental love. Jung accepted Freud's dicta with modifications and attached a great deal of importance to the power of present ideas. Dr. Potts explained that psycho-analysis was a reductive process, working down gradually to the pleasure principle operative in early childhood. Dr. Potts said it was most desirable that those who undertook to practise psycho-analysis should themselves have been subjected to the process by an expert. Neither those of the Freud nor the Jung school subjected to psycho-analysis all who came to them. The method was most suitable for cases of so-called neuroses and psycho-neuroses. In some cases of incipient mental disorder, analysis would precipitate an acute condition. He insisted that the physical condition of patients should always be investigated and treated.

Dr. W. BROWN (Oxford) expressed his general agreement with Dr. Potts's paper. He had himself been analysed, and he considered that the process as practised by the several schools was the same in quality. But he contended that it would be difficult to find anybody who had been completely analysed. He gave a brief sketch of Freud's most recent work on the libido theory.

Dr. A. WOHLGEMUTH held the view that suggestion on the part of the analyst had much to do with the results claimed.

Dr. M. HAMBLIN SMITH supported the claims of psycho-analysis, and gave the history of the attitude of the profession on these matters. Many senior doctors entertained quite a strong bias against psychology. Freud's system dealt with the normal as well as with the manifestations of the disordered mind. Many sound and permanent results had been brought about directly by the practice of psycho-analysis, and much would be done in the prevention of mental troubles by the application of the knowledge now available.

Dr. E. MAPOTHER said that what really concerned psychologists were the results of treatment, and the question which required to be answered was whether results were obtainable by the special methods of psycho-analysis which could not be attained otherwise. After 20 years he was still in doubt. The essence of the matter was free association and the attempt to trace anomalies to deviations of the infantile sexuality by that method. Yet truly free association was scarcely ever attainable. In practice the intervention of the analyst was generally greater than in theory it should be. He could not say he had seen a single case in which psycho-analysis produced results which could not be obtained by other means.

Dr. H. CRICHTON-MILLER said Freudism did not explain the creative factor in the mental life, but he thought psychologists should be ranged on the side of the coming principle.

Prof. ROBERTSON said he regarded Freud as one of the greatest discoverers the world had ever seen, and held that much psychological literature, though clearly inspired by that great man, failed to render to his genius its due acknowledgment.

Dr. M. A. ARCHDALE and Dr. T. A. ROSS also spoke, and Dr. POTTS replied.

The Maudsley lecture, an abstract of which appeared in THE LANCET last week, was delivered by Prof. ROBERTSON.

THE ANNUAL DINNER.

The annual dinner of the Association, held at the Hotel Victoria, on Thursday, was well attended, the chair being taken by Colonel J. R. Lord, the newly elected President.

After the loyal toast Dr. J. Greig Soutar proposed "The London County Council," and described eloquently the various and far-reaching functions of that body, showing that, whatever they were, they all combined in the great aim of securing health for the people. In his allusion to the maintenance by the Council of mental institutions, he included an applauded eulogy of Sir Frederick Mott. Sir George Hume, chairman L.C.C., having briefly responded, Dr. Percy Smith proposed "Prosperity to the Universities and Royal Colleges," enumerating the long roll of educational centres nowadays implied by the toast, and drawing attention to the gratifying fact that many of them paid special heed to the development of psychological studies. The toast was replied to by Prof. G. M. Robertson, President of the Royal College of Physicians of Edinburgh and Maudsley lecturer of the Association, and Dr. William Brown, Wilde Reader in Psychology, University of Oxford. Dr. Robertson traced eloquently the development of modern psychology from its start with Pinel, and his great pupil Esquirol, through Alexander Morison and others down to Mott, showed how the development went hand in hand with rising humanitarianism, until to-day we had, he claimed, mental hospitals that were a credit to the country. Dr. Bedford Pierce proposed "The Royal Society of Medicine and the British Medical Association," for which bodies Sir StClair Thomson and Sir Dawson Williams replied respectively, the second adding an eloquent tribute to the practical value of Mott's work. The toast of "The Guests," proposed by Sir Frederick Willis, was answered by the Rt. Hon. Hugh MacMillan, the chairman of the Royal Commission on Lunacy and Mental Disorder, who said that the report of that Commission was imminent, and would give no pleasure to certain critics of lunacy administration, although all his audience that evening might not be pleased with everything in the document. The Bishop of Southwark also replied, and the evening closed with the toast of prosperity to the Association, proposed by Sir Arthur Robinson, Permanent

Secretary, Ministry of Health, and replied to by the President.

On Friday morning Dr. NORWOOD EAST, medical inspector of H.M. Prisons, read a paper entitled Some Forensic Aspects of Epilepsy, which was discussed; and in the afternoon the President invited members and their friends to the Horton Mental Hospital, Epsom, where Colonel S. P. JAMES and Mr. P. G. SHUTE demonstrated the infection of mosquitoes and other processes in the treatment of G.P.I. by malaria. Dr. W. D. NICOL, the M.O. in charge of this department at the hospital, also gave a demonstration.

ROYAL SOCIETY OF MEDICINE.

SECTION OF ANÆSTHETICS.

THE meeting of this Section, reported in THE LANCET of last week, was continued on July 15th, the chair being occupied by Dr. F. H. MCMEHAN, a visitor from the United States.

Dr. WESLEY BOURNE read a paper on

Alleviation of the Acidosis of Anæsthesia.

It had been established, he said, that a true acidosis occurred in the anæsthesia produced by chloroform, ethyl chloride, ether, and—to a less extent—in that produced by ethylene and acetylene. The measure of a true acidosis was the lowering of the alkali reserve of the blood. Sodium and potassium were much increased in the urine after ether anæsthesia. The experimental observations indicated that phosphoric acid left the muscles during anæsthesia, and appeared in the liver until the resumption of the kidney function after the recovery of the animal, when it was redistributed and partially excreted. The ability of the liver to store this phosphoric acid seemed to depend on the degree of depression of the kidney function, and to be according to the depth of the narcosis. It had been suggested that the low alkali reserve and increased acidity of the blood in ether anæsthesia were due to the discharge of phosphoric acid from the muscles. The work on the subject done by the author and his colleagues included observations on human patients who were operated upon at the Western Hospital, Montreal. Patients who were given a phosphate solution had less nausea than control patients. It was best given per rectum immediately after operation, for when given by the mouth there was the risk that the patient might vomit the solution. As a result of giving phosphates, sleep was shortened.

Dr. MARY E. BOTSFORD (California University) read a paper dealing with

Anæsthesia in Urological Surgery.

She said that it was well known that ether and chloroform inhibit kidney function: Cushing had regarded this as due to the reduced blood pressure and impaired aeration of the blood. In most cases of urological surgery requiring a general anæsthetic nitrous oxide was the best form, as it did not alter the blood pressure, except to cause a rise during secondary saturation when the oxygen percentage was reduced. Cystoscopies in adults were usually done under some form of local anæsthesia, and if a preliminary injection of morphine was found not to interfere with kidney function it would seem to be a valuable auxiliary, especially in getting muscular relaxation under gas anæsthesia. She gave a review of 76 cystoscopies on female patients which were done at the Children's Hospital, San Francisco, the ages ranging from 5 months to 72 years. Sixty-three patients were given nitrous oxide and oxygen, ten having varying amounts of ether in addition, and five straight ether with gas induction, and five were operated on under local anæsthesia. There was a noticeable retardation in the voluntary micturition in cases in which ether was used, a slight delay when atropine was given, and none when morphine alone had been administered.

Dr. S. R. WILSON (Manchester) said that many years ago he gave up using morphia in cases of deep sections when nitrous oxide was employed.—Dr. T. P. KIRKPATRICK (Dublin) said that he had long noted that with ether anæsthesia the kidney function was inhibited. For general surgical operations patients did better with ether and recovered better if they did not have morphia.—Dr. H. E. FEATHERSTONE (Birmingham) agreed that early, quick, and uneventful recoveries from anæsthesia were more likely to take place in the absence of morphia, especially in cases in which the renal function was impaired. For prostatectomies he used nitrous oxide.—Dr. SAMUEL JOHNSTON (Toronto) considered that, clinically, morphine was a detriment to the average patient. There was the probability of giving too much of the anæsthetic of any kind, and when morphine had been given the patient did not react in the same way, nor did he recover so quickly. Some patients did not take ether at all well. For prostatectomy he used nitrous oxide and oxygen, with a small quantity of ether added.—Dr. F. E. SHIPWAY said that in the position of election for operation on the urino-genital system the respiratory movements should be as small as possible; he found that spinal anæsthesia gave the best results, with a small degree of general anæsthesia to keep the patient unconscious. Morphia and hyoscine were most excellent drugs to give beforehand—i.e., 1/6 gr. morphia, 1/100 gr. hyoscine.—Dr. Z. MENNELL spoke of the difficulty of controlling the dosage when teaching students. He had never used morphia, but he used atropine. Experience had enabled anæsthetists to disregard the statement, which had been copied from one text-book to another, that a small dose of atropine, without morphia, inhibited the kidneys from secreting urine.

Mr. T. P. DUNHILL (London) read a paper on

Anæsthesia in Goitre Operations.

He said that anæsthesia for patients suffering from the different forms of goitre required considerable versatility on the part of the anæsthetist. No one method was suitable for all forms. Always the patient's welfare must be the first consideration. For adenomata, single or multiple, unless of great size, general anæsthesia was as safe as for any operation in surgery; his own practice was to use endotracheal gas and oxygen. For removal of a large adenoma causing pressure he preferred local anæsthesia, but when it was deep in the thorax with moderate pressure there, he used endotracheal gas and oxygen, with a little ether. Nowadays chloroform was rarely given, but there were occasions on which it was the safest anæsthetic. For colloid goitre general anæsthesia was desirable. In exophthalmic goitre the operative death-rate 25 years ago was very high, and some of the deaths were due to the methods of anæsthesia then in vogue. The mortality was contributed to by operations on unsuitable cases, and at the wrong time, sometimes by the wrong surgeon. Patients ill with Graves's disease had but a small margin of safety, and usually chloroform was a dangerous drug to give. Ether, given skilfully, was safe for these cases. If the patient were a suitable subject gas-oxygen could safely be used or gas oxygen-ether, always provided that the right time was chosen and the surgeon did not attempt too much at one operation. It was not wise to attempt the operation at a time when the patient was in a state of great mental unrest. Local anæsthesia was best in the presence of auricular fibrillation. Chloroform gave the most comfortable anæsthesia for the surgeon, as breathing was quiet and bleeding was reduced to a minimum. But it was no more than reasonably safe, and this was not, in his view, sufficient. Ether, on the other hand, was very efficient and safe by the open method, the only objection being that the mask was a good deal in the surgeon's way. He thought it was wise to give an injection of morphine with atropine an hour before inducing general anæsthesia. Rectal anæsthesia had a field of usefulness, but a limited one.

EDINBURGH MEDICO-CHIRURGICAL SOCIETY.

AT a meeting of this Society held on July 7th Prof. W. RUSSELL, the President, took the chair, and Prof. R. STOCKMAN opened a discussion on

Rheumatoid Arthritis.

This disease, he said, was sufficiently familiar to need no formal definition. A bewildering number of names had been given to it, but though the name rheumatoid arthritis had been criticised, at least it gave some clue to the nature of the disease. It was reasonably certain that under this one term were included the results of the activities of a number of different but closely allied microbes, and until these had been identified it was best to be content with a general clinical designation. There was little doubt that the cause of rheumatoid arthritis was an infection of low virulence and great tenacity. Occasionally organisms had been found in the joints, but as a rule attempts to find them either in joints or blood had proved fruitless. That there were different forms was shown by the varying clinical courses of the disease—one form starting in the fingers and spreading to other joints, whilst another began an acute course in a larger joint. Sometimes glands and spleen showed enlargement, and in fact all forms presented the aspect of a low chronic septicæmia. The disease ran a more or less lengthy course, relieved by occasional exacerbations, finally coming to an end but leaving permanent damage in its wake. The main attack was on the white fibrous tissue of the locomotor system. It caused a great deal of general stiffness, aching, and pain quite apart from the joints which was due to perineuritis in the inflamed connective tissue. In certain cases, however, the bones seem to be attacked more than in others. The remaining well-known symptoms—muscular atrophy, deformity of bone, and contractures—were really sequelæ of the original disease. The infection was in all probability acquired through the alimentary and other open tracts and through the skin; in the majority of cases a septic focus could not be traced, but often arthritis followed tonsillitis or some other septic condition, whilst connexion with a skin disease, such as psoriasis, was often proved.

Treatment, said Prof. Stockman, resolved itself into combating the infection, removing fibrositis, and correcting contractures. No known drug was specific, and until recently treatment had been carried out on general tonic lines with liniments, baths, and massage, which lessened the stiffness and pain, but did not check the disease. Vaccines had been extensively used, but were not of proved specific value. The one treatment of real value was that known as protein shock or non-specific protein therapy, the benefit of which appeared to depend on the sharp feverish reaction following injection, which seemed to raise the defensive powers of the body. Personally he used the typhoid bacillus as being most satisfactory; beginning with a dose of 100 millions intravenously, the treatment was repeated every six days until six injections had been given, the dose being gradually raised to 200 or 250 millions. The reaction began within an hour with a rigor and a rise of temperature to 103°–105° F., followed by uncomfortable heat, then profuse perspiration and a return to normal, the whole reaction lasting from six to twelve hours. There was also a marked focal reaction with pain in the affected joints and fibrositic areas. Occasionally there was herpes at the mouth and slight albuminuria. A febrile reaction, if any, usually settled after the third or fourth injection. The whole proceeding, while disagreeable at the time, was perfectly safe and was followed by a feeling of increased well-being.

Dr. G. L. KERR PRINGLE (Harrogate) said that, although fully alive to the association of infective foci with arthritis, he thought that such factors as soil and diathesis were too often forgotten. Not everyone who had a septic focus suffered from arthritis, nor did an injury to a joint always produce osteo-arthritis. The commencement and cessation of menstruation were associated with the disease. Pregnancy had long been considered a cause, and many arthritics who became pregnant claimed that their arthritis improved during pregnancy, only to return with increased severity after parturition. It had been found that glucose tolerance is lowered in most cases of proliferative arthritis, and that when a septic focus is removed the tolerance becomes more normal, and also that these cases improve on a low carbohydrate diet. This last was an important point in treatment, and the patients should be fed on red meats, green vegetables, and fruit. Basal metabolism did not appear to be altered. There was evidence that achlorhydria allows streptococci to multiply more readily in the bowel, and it might therefore be an accessory factor in the disease.

Infective foci, continued Dr. Pringle, should be removed. If achlorhydria was present hydrochloric acid should be given. In young women with abnormal menstrual history thyroid extract might be administered in small doses along with the French tincture of iodine in increasing doses for long periods, the patient being on a low carbohydrate diet. Where there was intestinal stasis lavage was often helpful. A daily record of temperature and a weekly record of weight ought to be kept; the patient should be as much as possible in the fresh air, and local movement should be encouraged. Radiant heat, hot air baths and local steam baths, paraffin-wax baths, or hot douching produced local hyperæmia, which should be followed by massage to the wasted muscles. It was often advisable to place the limb after massage in a trough splint with a little extension. Where there was effusion, repeated aspiration with a large hypodermic needle relieved pain and prevented distension of the capsule and stretching of ligaments. Hot mineral water baths followed by hot packs produced sweating, slightly raised the temperature, dilated the capillaries, relaxed the muscles, and often induced sleep. In the sequelæ of the disease the memory of pains experienced was difficult to eradicate; encouragement was very necessary, and each case and each joint must be considered individually. Semi-flexed knee-joints should be straightened, and if massage and hot baking would not bring about the desired effect, tenotomy, synovectomy, or other measures must be considered. Nothing surgical should be attempted where active disease was present. A glucose-tolerance test was a good index; if the tolerance was lower than normal operation should not be attempted. The use of vaccines in arthritis Dr. Pringle considered uncertain. Wonderful results were sometimes obtained, but sometimes they were very disappointing. His own experience of the intravenous injection of T.A.B. was limited. Strasser, of Vienna, pointed out that the whole object of intensive treatment, whether by protein or sweating baths, was to substitute for the chronic infective or metabolic process a slightly more acute and favourable phase.

Dr. W. T. RITCHIE said that fibrositis was a very common condition from which everybody suffered at times. Rheumatoid arthritis, in proportion, was much less common; the connexion between the two conditions was obscure. The path of infection, he thought, was often by the pelvic organs, and the prostatic secretion especially should be investigated. Peptone shock was disappointing.—Dr. DAVID HUSKIE believed that calcium metabolism was involved. He saw no reason why a full diet should not be given, including red meat, a food usually excluded from the diet.—Dr. J. M. BOWIE recommended prolonged treatment by iodine. In his own experience he had found colon lavage and thyroid of little use.—Dr. ALEXANDER GOODALL thought that if improvement was to occur it would be seen very early in treatment.—Dr. JOHN EASON took the opposite view, stating that frequently improvement was only seen after treatment had been persevered with for some time. He suggested that exhaustion, especially that incurred in sick nursing, might be a cause.

THE GOLD TREATMENT OF TUBERCULOSIS.

SECOND REPORT BY THE MEDICAL RESEARCH COUNCIL.*

THIS second report deals almost entirely with clinical experience. It does not attempt a review of the laboratory evidence on what is at the root of the whole inquiry—namely, the action of sanocrysin in arresting the spread of tuberculosis implanted experimentally into animals.

The results are given briefly for each separate clinical centre at which the observations were made. For convenience of reference the after-history of individual patients who were given by serial numbers in the first report [1] is here described under the same serial numbers. No new reference numbers are given for fresh cases described in the present report.

CLINICAL OBSERVATIONS.

St. Bartholomew's Hospital (Prof. F. R. Fraser and Dr. C. F. Harris).—Eleven cases of pulmonary tuberculosis have been treated or are undergoing the treatment. Two cases of abdominal tuberculosis were treated and one case of lymphatic leukæmia was studied as a control. The cases of pulmonary tuberculosis were all of a more chronic type than those in which the best results are reported from Denmark. One death occurred after a few doses of sanocrysin, which were given only because a fatal issue seemed inevitable. Severe reactions were experienced with large doses, but later it was found that with smaller initial doses at longer intervals the treatment was well tolerated. No striking results have been obtained, but the unexpected improvement in certain cases suggest that sanocrysin may be of service in the early cases of pulmonary tuberculosis or in the fresh spread in more chronic cases. The general impression has been formed that the method of treatment deserves further investigation.

London Hospital (Prof. Arthur Ellis).—Since the publication of the last report, only one new case of pulmonary tuberculosis has been treated. This patient, whose condition was desperate at the time treatment was commenced, improved to a very remarkable extent. The patient had been under observation in hospital for nearly a year and was going very rapidly down hill with hectic temperature, repeated hæmoptysis, and severe pleural pain. At his own insistence a course of sanocrysin injections was given. No severe reactions occurred and improvement was rapid and continuous. He became afebrile; pain, cough, and hæmoptysis disappeared; his sputum diminished from four ounces daily to slight morning sputum only. He was discharged to a sanatorium and when last heard from some weeks ago was doing well.

The after-histories of the cases detailed in the first report have been as follows:—

CASE 1.—Has been in a sanatorium and is now back at home. His general condition is much the same as on discharge, but the breath is now definitely fœtid and the moist sounds at the right base are much more numerous. The cough and sputum have both increased. There are no tubercle bacilli in the sputum.

CASE 2.—Gradually failed, and died in his home in January, 1926. No post-mortem examination was obtained.

CASE 3.—Downward progress continued. He died early in June, 1925, five months after the last injection of sanocrysin. Specimens of various viscera were obtained post mortem and sent to an analytical chemist for analysis for gold. The kidney, liver, and colon contained no trace, but in a portion of the lower lobe of the left lung a definite trace of gold was detected, estimated roughly at 3 mg. per 100 g. of lung tissue. The total gold salt used in this case was only 1·5 g.

CASE 4.—Recovery from the exfoliative dermatitis eventually occurred. Coincident with this, the exacerbation of the tuberculous process gradually subsided and the patient again became afebrile. She is now able to be up and about, but the physical signs are more extensive and her general condition worse than before treatment was given. It is some three months since she was last seen.

CASE 7 (*Control*).—This patient was a case of Hodgkin's disease treated with sanocrysin as a control. The patient died in January, 1926. No post-mortem examination was obtained.

Prof. Ellis considers that the value of the serum is doubtful. He suggests that his bad results may have been due in part to serum. All the cases that did badly had very severe serum sickness. It was in the period of resulting prostration that exacerbation of the tuberculous process was particularly manifest.

St. Mary's Hospital (Prof. F. Langmead).—No new cases are reported. With regard to the original cases—

CASE 9.—Convalescence was satisfactory. The patient went to Ventnor for six months, where tubercle bacilli were present in the sputum at first. Her health is now fairly good. The sputum has been free from tubercle bacilli for some time, and radiograms show that there has been no spread of disease.

CASE 10.—Satisfactory convalescence. At work as a carman since August, 1925, and no tubercle bacilli in sputum. A similar recovery had occurred previously, and before sanocrysin treatment, when the patient had been rested in a sanatorium.

St. Thomas's Hospital (Prof. H. MacLean and Dr. G. T. Hebert).—Ten new cases have been treated with considerable, though it may prove to be only temporary, improvement. Out of the five original cases, which were chosen as being of a mild type, two have relapsed decisively. The after-history of all the original cases is as follows:—

CASE 11.—Has kept well, no evidence of active tuberculosis, but is under treatment for pityriasis rosea.

CASE 12.—Went to a sanatorium for three months, until June, 1925; tubercle bacilli in sputum at that time. He was in good health three months later but not at work; then married and moved out of London, leaving no address.

CASE 13.—Went to a sanatorium for three months, until July 8th, 1925; apyrexial, but tubercle bacilli in sputum at that time. He worked in the country as a grocer's assistant till December, 1925, when symptoms of active disease reappeared. In January, 1926, there was infiltration of both lungs, and in March, 1926, he was admitted to the Lambeth Hospital.

CASE 14.—Went to a sanatorium for three months, until July, 1925. No further definite symptoms of tuberculosis. The patient is now at work.

CASE 15.—Lived in the country during the summer of 1925. In September, 1925, was not looking well, but no tubercle bacilli were present in the sputum. Patient had pleurisy of the left side in December, 1925, followed by symptoms of active pulmonary tuberculosis. Admitted to a sanatorium in February, 1926.

University College Hospital (Prof. T. R. Elliott).—Twelve cases of tuberculosis have been treated, including the four described in the first report. Three were of glandular or osseous infection and gave no special information. There were seven patients with pulmonary tuberculosis.

CASE 16.—In the first report it was concluded that the girl had been made worse by the treatment. After discharge from hospital she remained at home in a poor environment. But she is now well and back at work. There are no tubercle bacilli in the sputum, and the disease appears to be completely arrested; an unexpectedly good recovery in view of her originally poor physique.

CASE 18.—The patient returned to work soon after discharge from hospital and remains well.

CASE 19.—The boy went to work with very long hours in a factory last autumn. His health broke down and he was readmitted to hospital. There appeared to be more extensive fibrosis in the lungs, but there were no tubercle bacilli in the sputum. He recovered quickly and was then sent to the country.

One new case of pulmonary tuberculosis developed very serious jaundice, with clay-coloured stools, after two doses of 0·5 g. and 1 g. respectively. Recovery from the hepatitis was slow and treatment was, therefore, discontinued. Such toxic jaundice appears to be rare in Danish experience. A similar but fatal

* The first report appeared in THE LANCET of April 18th, 1925, p. 833.

case was described (Case 8 from St. Mary's Hospital) in the first report. Another patient with extensive caseous lesions in the left lung and only two months' history improved with great rapidity under treatment. The fever ceased after two severe rash reactions, and ultimately the tubercle bacilli disappeared from the sputum. Three months later a relapse occurred at a sanatorium during December. The patient was readmitted to hospital with further spread in the lungs and tuberculous laryngitis. A second course of sanocrysin failed to evoke a rash or high pyrexia. The patient is still under treatment and appears to be improving only slightly. One control case was tried; a woman, aged 25, with prolonged fever ranging daily from 99°–101° F., and high eosinophilia (60 per cent.), of unknown cause. Three injections of 0·5 g. each were given; no rash resulted nor any obvious temperature change. The best results in tuberculous infections seem to have been obtained when the patient reacted strongly with fever and a rash. Prof. Elliott concludes that the treatment is definitely beneficial in early cases without extensive fibrosis, though it is rarely capable of effecting a rapid and complete arrest of tuberculous disease.[2]

Guy's Hospital (Dr. G. Marshall).—Sanocrysin had not been used at this centre at the time of the first report. During the last year eight cases of pulmonary tuberculosis have received treatment. All these cases had extensive pulmonary disease and were of some length of duration. Three cases showed apparent arrest, two cases improved, while the remaining three cases were unimproved. In no instance was the disease extended by the treatment. The improvement resulted after other modes of treatment such as rest and sanatorium were tried and failed. Severe reactions with exanthem and albuminuria have been observed although small doses were employed. One case of infective endocarditis, in which the spleen diminished in size and became impalpable, ceased treatment after 11 doses. In addition, provocative diagnostic doses of sanocrysin have been given to three patients. It is considered that sanocrysin has a beneficial effect when used with discretion and is likely to become a part of the routine treatment in selected cases of pulmonary tuberculosis.

Brompton Hospital for Consumption and Diseases of the Chest (Dr. L. S. T. Burrell).—At this centre, also, observations had not been commenced at the date of the first report a year ago. Twenty cases were selected for treatment as being patients who were getting worse or had failed to improve after other methods had been tried. These form the large group of fibrotic or fibro-caseous cases, slowly progressive with frequent relapses and periods of improvement. Time will show whether or not the progress of disease can be checked in these cases by sanocrysin, and in this report it is only the immediate result that can be shown.

In the first five cases in the series artificial pneumothorax had been induced with very good initial results. In each case, however, there had been a relapse with return of sputum containing tubercle bacilli. After a short period of treatment with sanocrysin one patient was slightly worse. The other four improved, two of them losing the tubercle bacilli from the sputum. The next eight cases (Nos. 6–13) were of the fibro-caseous type. In all, sputum containing tubercle bacilli was present. After sanocrysin the number of tubercle bacilli in the sputum was reduced in every case, and in four they disappeared altogether, though they reappeared in two of these. In another case (No. 14) there was long-standing disease complicated by a chronic pleural effusion, which was converted into a hydropneumothorax. Sanocrysin was given in order to control the disease in the other lung, but it had no apparent result, either good or bad. No. 15 was one of spontaneous pneumothorax, and again the sanocrysin was given in an attempt to improve the condition of the other lung. The patient, however, became worse. In the final five cases there was bilateral disease; the worse lung was treated by artificial pneumothorax, and sanocrysin was also given in the hope that it would have a good effect on the disease in the other lung. Of these five cases the tubercle bacilli disappeared from the sputum in four (though in one they reappeared) and in the other they were much reduced in number. This result, however, was probably due largely to the pneumothorax, and in one case (No. 16) the tubercle bacilli disappeared after the pneumothorax had been induced but before the sanocrysin was started.

The sanocrysin was given intravenously and the initial dose was 0·25 g. This was followed a few days or a week later by 0·5 g., then 0·75 g., and finally 1 g. This was the maximum dose given and was repeated weekly. It was noticed that in many cases no reaction occurred until a dose of 0·75 g. or 1 g. was reached, and that the reaction got less on subsequent injections. In two cases small doses (0·1 g.) were given daily for a week and then this course repeated after a week's interval. This method had no effect in one case, and in the other it produced slight albuminuria, pains in the limbs, and disappearance of tubercle bacilli from the sputum. This method of giving frequent small doses might possibly be of advantage in acute cases.

Taking the 20 cases as a whole, two became worse and 18 improved or remained unchanged. In ten cases tubercle bacilli disappeared from the sputum, although in three of these they reappeared. In five cases there was no reaction after the injections. Rigors occurred in nine cases, and a slight evening rise of temperature with shivering and malaise was also noted after some of the injections. A long febrile reaction was seen in only two cases (Nos. 1 and 13). An erythematous rash occurred in four cases. Vomiting a few hours after the injection in nine cases. Pain in the limbs was present in four cases. Albuminuria was noted in three cases only and was very slight and transient. One patient complained of a metallic taste in the mouth and small blisters appeared on the mucous membrane of the mouth.

Warwickshire King Edward VII. Memorial Sanatorium, Warwick (Dr. F. R. G. Heaf).—Twenty patients suffering from pulmonary tuberculosis (all stages, with tubercle bacilli present in the sputum) have been treated with sanocrysin, and six are still under treatment. Of the 20 patients, two left before the course of treatment was completed, and in two cases treatment was stopped owing to the advanced state of the disease. Of the 16 remaining cases, ten were regarded as quiescent at the termination of treatment, tubercle bacilli being absent from the sputum and X ray evidence and physical examination indicating marked improvement; one was improved, but tubercle bacilli were still present; two showed no alteration; and three were worse. In two cases sanocrysin was given in conjunction with artificial pneumothorax treatment, and the progress of a recent lesion on the side opposite to the collapsed lung was arrested. Dr. Heaf hopes to be able to report on the after-history of the patients at the expiration of one year. He concludes that sanocrysin arrests the early progressive lesion but has little or no effect upon lesions associated with fibrosis.

Wales (Prof. S. Lyle Cummins).—Sanocrysin has been tried at three centres in Wales under the general supervision of Prof. S. L. Cummins. In all, 16 cases have been fully treated as follows: Glan Ely Hospital, Cardiff: Prof. Cummins, six cases; Dr. A. Brownlee, one case. Cymla Hospital, Neath: Dr. N. Tattersall, six cases. South Wales Sanatorium, Talgarth: Dr. H. E. Watson, three cases.

Details of the individual cases and their results are given elsewhere[3] by Prof. Cummins and Dr. Tattersall. In regard to the after-history of the cases quoted in the original report a year ago—

CASE 21.—The patient was sent to a sanatorium. Sputum was negative for a time, but in July became positive. Two more doses, 0·5 g. and 1 g., were given. Tubercle bacilli disappeared from the sputum and the patient regained weight. He now has persistent albuminuria.

CASE 22.—The patient returned to work at a colliery in April, 1925. In July tubercle bacilli appeared again in the

sputum, and he was later admitted to hospital. A second course of 2·25 g. was given in November. The patient has regained weight and is now capable of light graded work.

Two cases of extensive and obviously grave pulmonary tuberculosis, aged 14 and 15 respectively, died two or three months after sanocrysin treatment, which did not appear to have influenced the illness in any markedly unfavourable way. One of Dr. Watson's cases developed exfoliative dermatitis, presumably from metallic poisoning, after 6·25 g. Dr. Tattersall's patients had all given fairly good results. Prof. Cummins, apart from the two expected deaths in toxic cases, had four favourable results. "There was dramatic and rapid improvement in each of them after a short course of sanocrysin. The tubercle bacilli disappeared from the sputum and the weight after treatment got back to or outstripped the highest known weight. This favourable change, though not persistent, was maintained for several months after the course of treatment." Prof. Cummins concludes that sanocrysin, *judiciously used*, is a valuable means for raising the less advanced type of "hospital" case up to a "sanatorium" level, and perhaps for the actual cure of some cases of a more favourable clinical type.

Royal Infirmary, Edinburgh (Prof. Sir Robert Philip and Prof. D. Murray Lyon).—Twenty-two cases of tuberculosis have been treated by means of sanocrysin. Undoubted cases of tuberculosis were selected who had already benefited by institutional treatment. All cases were afebrile; 17 were examples of pulmonary tuberculosis with tubercle bacilli in the sputum. The lesions ranged from slight localised nodules to extensive cavity formation or marked fibrosis. The series examined also included two cases of tuberculosis of the glands, one of renal tuberculosis, and two of lupus. Other therapeutic measures were discontinued during the trial of sanocrysin. Eight patients had previously had more or less prolonged treatment with tuberculin by percutaneous method. The patients received from two to ten injections of sanocrysin, the most usual number being six. The quantities of sanocrysin administered have varied from 1·5 g. to 10 g. In all cases the initial dose was 0·5 g. and subsequent injections have usually been 1 g. Anti-tuberculous serum was given in ten of the cases and in small quantities only (doses of 20–40 c.cm.), but its use was not encouraging.

Considering first the five cases of non-pulmonary tuberculosis, the renal case was unimproved. One case of tuberculosis of the glands was improved, the glands becoming more discrete and distinctly smaller; in the other case the treatment had to be discontinued owing to severe local inflammation. The two cases of lupus after each injection of sanocrysin exhibited a considerable congestion in and around the affected area. Later, the scales practically disappeared and the centres of the lesions became pale as if cicatrisation had increased. The margins, however, remained red and raised in nodules. When last seen two months after the beginning of treatment, both cases had relapsed, the lupus areas appearing active and heavily encrusted. On the 17 cases of pulmonary tuberculosis the treatment had to be discontinued in seven cases, in three because of the severity of the reactions, and in four others on account of the discomfort and distress experienced by the patients. Of the ten cases that underwent the full course, seven ultimately showed decided improvement when examined from five to ten months after the termination of treatment. One, who was apparently doing well, subsequently had several attacks of hæmoptysis and died.

In studying the effects of the sanocrysin treatment of tuberculosis, the Edinburgh workers state that the principal questions to be answered are: (1) Whether sanocrysin possesses any specific action against tuberculous tissues. (2) Whether its employment has benefited the patients subjected to it. (3) Whether the present method of administration is the most suitable

(1) It is observed that the reactions which follow the administration of sanocrysin might arise in different ways: (*a*) The drug, unchanged or chemically altered, may act on the tissues directly; (*b*) as a result of a selective action of the gold on tuberculous tissues and organisms, specific toxins might be liberated. The resultant reactions might be termed "gold" effects and "tuberculin" effects respectively. The evidence suggests that the focal reactions, the increase of sputum, the papulo-erythematous skin eruptions, the pyrexia, and the gastric symptoms, especially vomiting, which the authors noted accompanied the earlier doses of sanocrysin in a course may be regarded as "tuberculin" effects. On the other hand, the albuminuria which occurs late in the course and in association with desquamative skin lesions and many of the alimentary symptoms (stomatitis and diarrhœa), appears to be a "gold" effect due to irritation accompanying the accumulation of the metal in the renal cells. The gold salt, therefore, appears to produce two types of effect in the body, the "specific" action on tuberculous areas which is immediate, and the cumulative poisoning seen in the excretory organs. The authors add that two questions still remain unsolved—namely, the cause of the early decline of the "tuberculin" reactions, and the reason for the failure of later doses of sanocrysin to evoke albuminuria.

(2) The immediate effects on the health of the patients have varied greatly. The majority have experienced more or less discomfort and some have suffered severely. The gastric symptoms and tendency to severe dermatitis combined with the almost universal and often considerable loss of weight make the treatment a matter not lightly to be undertaken in its present form. To avoid the risk of producing severe reactions it would appear desirable to aim at a smaller concentration of sanocrysin in the system, either by reducing the size of the dose, or by lengthening the interval between the doses, or by combining these suggestions. In several cases a striking reduction has occurred in the number of tubercle bacilli in the sputum. Negative films became more frequent in some patients, but in no instance did the bacilli permanently disappear from the sputum, and, as yet, no patient can be said to have had his disease arrested. Apart from the loss of weight produced no patient has been harmed by the course of treatment. The one death that occurred is not ascribed to the treatment, as it took place after the full course had been completed with apparent benefit at first resulting. Some degree of clinical improvement has been observed in the greater proportion of patients who underwent the full course. No dramatic change has occurred, but there has been in several instances a steady advance at a greater rate than might otherwise have been expected. This improvement has not in all cases been maintained; some of those who did best during the course have since retrogressed, whilst others who did not seem immediately benefited have since greatly improved.

(3) The authors conclude their report by some observations on the intramuscular administration of sanocrysin. They formed the impression that this method presented some advantages—e.g., less albuminuria and less rapid loss of weight, and that further experience was likely to reveal ways of still further excluding the discomfort of the procedure.

Edinburgh Public Health Department (Dr. J. Guy).—Dr. Guy has treated ten cases of pulmonary tuberculosis with sanocrysin. The first six were given small and gradually increasing doses, and the last four received large doses, but not the full doses recommended by Prof. Möllgaard. In the first six of the series sanocrysin did not appear to have any appreciable effect for good or ill. In the last four there appeared to be some slight improvement and lessening of the sputum. This, however, is a regular feature of sanatorium régime. Dr. Guy considers that so far there does not appear to be any marked curative effect from sanocrysin. He infers that the drug has

some specific effect on the tuberculous lesion, as in the last four cases treated signs of increased moisture were commonly noted after the injection. He regards sanocrysin as worthy of further trial.

Northern Ireland (Dr. A. Trimble and others).—A committee was constituted last year to supervise the trial in the Belfast area of sanocrysin as a method of treatment of tuberculosis. The reports from the three institutions selected for the test are thus summarised :—

Belfast Municipal Sanatorium (Dr. Percy Walker). Six male patients treated. Each patient received seven injections, totalling 6·5 g. each. All these patients were suffering from pulmonary tuberculosis (Turban-Gerhardt : third stage). Result : One case appears to be arrested, two are definitely greatly improved, the sputum being now negative as regards tubercle bacilli, two are improved clinically but the sputum is still positive. One case shows no change. A second group of three patients is still undergoing treatment.

Forster Green Hospital (Dr. B. R. Clarke).—Twelve cases of pulmonary tuberculosis treated, 11 with tubercle bacilli in the sputum. Results : The sputum of four patients became negative, four patients had a diminished number of tubercle bacilli, and in two patients there was an actual increase of tubercle bacilli after treatment. Clinically, eight of the 12 patients showed improvement, the condition of two was unchanged, and two appeared to be worse as a result of the treatment. Five further cases are undergoing treatment.

Royal Victoria Hospital (Dr. S. I. Turkington).—Four cases of pulmonary tuberculosis treated. Three cases were definitely improved ; in two of these cases tubercle bacilli disappeared from the sputum after treatment. The fourth patient had a profound reaction after the third dose of sanocrysin and died from toxæmia. Serum was used in this case but it had no beneficial effect.

The *conclusions* of the Belfast Committee are as follows : (1) Sanocrysin is a distinct therapeutic advance in the treatment of tuberculosis in definitely selected classes of cases. (2) The undoubtedly good results that have been obtained must, however, be observed for a further term, say, at least one year, to see whether the results are permanent, or whether further courses are advisable. (3) Sanocrysin as a method of treatment is not suitable for general use, and with our present limited knowledge it should only be used in institutions equipped with the necessary apparatus, and under the direct control of sufficiently experienced physicians, with expert knowledge in the treatment of tuberculosis. (4) Further research is necessary in order to determine : (*a*) the class of case most likely to benefit by this form of treatment ; (*b*) the correct size of dose for individual patients ; (*c*) the intervals between the doses ; (*d*) the length of the whole course of treatment ; and (*e*) the significance of the clinical phenomena which would seem to indicate the discontinuance of the treatment.

GENERAL SUMMARY.

Experience in the selection and treatment of cases has greatly lessened the dangers attending the use of sanocrysin. The first collective report by the Medical Research Council described two deaths directly caused by sanocrysin out of a total of about 30 cases treated. This second report records only one similar fatality (Royal Victoria Hospital, Belfast) in a much larger number of cases treated, about 140. But the risk remains. There may be sudden or progressive exaggeration of the more serious symptoms of the tuberculous infection, or there may be a poisoning of the kidney, of the liver, and even of the skin with a drug dermatitis which is quite distinct from the relatively transient rash. All these dangerous features are far more liable to arise in the sanocrysin treatment of tuberculous patients than in the use of salvarsan for syphilitic or other infections. All patients under treatment must, therefore, be in bed and under close medical control.

In the last 12 months it has become the custom to give smaller doses of sanocrysin and at longer intervals than those used with the cases described in the first report. The patient is thereby spared from dangerous reactions and even from any great discomfort. It is, however, debatable whether this attenuation of the treatment for the sake of the patient's immediate welfare may not have the disadvantage of lessening the final benefit. The arguments on either side are given in two recent books by Secher [4] and Würtzen [5] respectively, when describing clinical results obtained in Copenhagen.

The special serum has rarely been used and there is no fresh experience to record about it. Nor is there much more evidence upon the question whether a well-marked reaction to sanocrysin can be accepted as a diagnostic test for tuberculous infection. It would, indeed, appear from the reactions seen by Fournier and Mollaret [6] in the treatment of human syphilis with a similar gold salt that such reactions are not specific for tuberculosis.

As in the first report, it was again evident that there may be an advantage in collecting evidence from different clinical observers as to the possible benefit of sanocrysin treatment. Some thought that nothing more was seen than might have been expected as the result of prolonged rest under hospital or sanatorium control. But others were very emphatically of the opinion that sanocrysin did cause unusually quick amelioration of all the features of a tuberculous infection, especially in the lessening of sputum and disappearance of tubercle bacilli. The question of secondary infections of the lung tissue by other organisms has not been dealt with. The results described are considered only in the broad aspect of clinical recovery or deterioration, for there are no laboratory tests yet available for analysis of any possible changes in a patient's powers of resistance to tuberculous infection.

The Medical Research Council received by the generous courtesy of Prof. Möllgaard a free supply of sanocrysin and serum for trial in Great Britain over a period of 12 months. The trial has shown how dangers may be averted, and, in the opinion of some workers, it has given indication that along the line of some such substance as sanocrysin there is definite hope of a drug treatment that will check the progress of a tuberculous infection and allow the patient's natural powers of resistance better play in finally arresting the disease. These various clinical reports, for which the Council are greatly indebted to the observers, will suffice to indicate to the medical profession the general need for extreme care in the use of sanocrysin and the particular types of infection in which it may be expected to cause some improvement.

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3. Cummins, Tattersall, and others : Discussion on the Treatment of Pulmonary Tuberculosis with Sanocrysin, Proc. Roy. Soc. Med., 1926, xix., No. 5.
4. Knud Secher : Treatment of Tuberculosis with Sanocrysin and Serum, Copenhagen, 1926 (Levin and Munksgaard).
5. C. H. Würtzen : Recherches sur les effets de la Sanochrysine, Copenhagen, 1926 (Levin and Munksgaard).
6. Fournier and Mollaret : Conp. Rend. Acad. des Sciences, 1925, clxxxi., 943.

PAYING PATIENTS OF LIMITED MEANS. — The trustees of the late Colonel John C. Barlow have allocated a sum of £65,000 to the enlargement and improvement of Bury (Lancashire) Infirmary. The conditions attached to the gift require the provision of accommodation for persons of limited means as private paying patients. The extensions will provide more women's beds, a maternity department, and the erection and equipment of a new electro-massage, X ray, and sunlight treatment department. There will be 11 private nursing rooms, with an operating theatre attached, for paying patients, who will be entitled to be attended by their own doctors.

Reviews and Notices of Books.

HEART DISEASE.

Les Angines de Poitrine. By Dr. LOUIS GALLAVARDIN, Médicin des Hôpitaux de Lyon. Paris: Masson et Cie. Pp. 181. Fr.25.

THE main part of this book consists of a review of angina pectoris, based on the author's own personal observations on 791 cases, and presented at the eighteenth French Congress of Medicine in 1925. A final section is devoted to the discussion of points of interest arising out of the records of a series of 20 cases which came to autopsy. The difficulties of this subject are fairly faced by Dr. Gallavardin, who has chosen to regard it as one might regard the broad subject of dyspnœa. A cry of distress is heard, but the underlying disease is multiform. This was also James Mackenzie's attitude, though many authors have preferred not to include all pain of cardiac origin under the term angina pectoris, and it is not customary to do so in this country. The author holds to his statement that there are grave and there are benign anginas. Perhaps the book gains by this aspect, for it is based on his extensive observations of patients all of whom had pain.

In the opening chapter the author refers to the uncertainty of quantitative diagnosis in a condition where the symptoms rather than the objective signs constitute the central feature of the picture. He differentiates true angina from the other forms of cardiac pain and classifies his cases into three groups: (1) organic, (2) doubtful, and (3) nervous. In the organic cases some structural cardiac or aortic lesion was present. This group includes 617 cases and is further subdivided into (*a*) those (486) cases in which pain was brought on by exertion; (*b*) those cases in which the attacks occurred only during rest or at night; and (*c*) those cases in which the association with other special symptoms such as dyspnœa suggested a different ætiological factor and appeared to justify classification in a separate group. Into the second main group—i.e., the cases of doubtful significance—Dr. Gallavardin places 174 cases in which the clinical picture was atypical. In 52 of these pain occurred on exertion, and in the remaining 72 only at rest or at night. As to the nervous type, the author reviews the evidence for the existence of a benign type of angina; he is of opinion that such cases do undoubtedly exist, and that in them the condition is probably due to hyper-excitability rather than to hyper-excitation of the nervous system. His 50 cases in this group comprise 30 men and 20 women—a very high male incidence which is probably attributable to the rigid standard which he has adopted in separating angina from other types of cardiac pain. The diagnosis of "angina névrosique" must be based chiefly on the history, since in some cases of true angina physical signs are absent. The special points to be noted are the multiplicity of manifestations or, as Dr. Gallavardin aptly expresses it, the "exuberance of symptoms," and secondly, the absence of any quantitative relation between pain and the amount of effort required to induce it.

In the section of the book devoted to pathogenic considerations the author inclines to the view that the majority of cases are attributable to spasm of the coronary arteries, and points out that in 12 out of 20 autopsies on cases of angina a coronary lesion was present. In 25 cases, on the other hand, where post-mortem examination revealed infarction of the heart, anginal symptoms occurred in three only. Spasm of the coronary arteries may be compared with spasm which occurs in the limb arteries of patients with intermittent claudication, and just as infarction of the heart may occur without angina, so in the majority of cases of senile gangrene there is no previous history of intermittent claudication. In conclusion, the author points out that any benefit likely to be derived from surgical measures in the treatment of angina lies not in the hope of relieving the pain, but of interrupting the reflex path responsible for producing coronary spasm.

This small book is written in a fluent style by one of the most esteemed French authorities on heart disease. It is easy and interesting to read, it conveys the author's own experience and deductions, and we welcome it as a valuable contribution to a complex subject.

Modern Methods in the Diagnosis and Treatment of Heart Disease. Second edition. By FRANCIS HEATHERLEY, M.B., B.S. Lond., F.R.C.S., Superintendent, Heart Clinic, Manchester; and Cardiologist to the Ministry of Pensions. London: Baillière, Tindall and Cox. 1926. Pp. 269. 8*s.* 6*d.*

IN the second edition of his book on modern methods in heart disease Dr. Heatherley adds two new chapters: of these the first deals with blood pressure and the second with treatment of cases of the effort syndrome. The author states in his preface that the purpose of the chapter on blood pressure is to awake the interest of the general practitioner and to stimulate him to play his part in making original observations which will help forward the advancement of knowledge by affording data on which to base statistics. Dr. Heatherley gives a clear description of the auscultatory method of blood pressure estimation and refers to several points which have proved of interest to him and which are likely to be unfamiliar to many practitioners. In this chapter the ten pages which are devoted to the general principles of research contain many maxims worthy of the attention of those who have had no previous experience of original work.

An appendix, dealing with hints to patients on the home treatment of functional disorders of the heart, consists of a brief popular account of the nature of functional nervous disorders and their treatment. This appendix, which the author states to be largely based on Dr. Geikie Cobb's Manual of Neurasthenia, has been distributed to pensioners attending the Manchester Heart Clinic, and has been found of value in obtaining their intelligent coöperation in the matter of treatment. Dr. Heatherley's book would be improved by a bibliography containing references to the numerous authorities quoted in the text, in place of the "list of interesting books" which it at present contains.

The book is pleasantly written and will be of interest to those who are concerned with the medical examination of pensioners.

BAINBRIDGE AND MENZIES' ESSENTIALS OF PHYSIOLOGY.

Fifth edition. Edited and revised by C. LOVATT EVANS, D.Sc. Lond., M.R.C.S., L.R.C.P., F.R.S., Professor of Physiology, University of London, at St. Bartholomew's Medical College. London: Longmans, Green and Co. 1925. Pp. 508. 14*s.*

THE progress of physiology is so rapid that not only the larger and more discursive but also the smaller condensed text-books require constant revision. We welcome, therefore, a new edition of Bainbridge and Menzies' well-known work, brought up to date by Prof. Lovatt Evans. The merits of the book have long been recognised, and it is hardly necessary to add that the revision in such competent hands has been well done. Students preparing for pass examinations in physiology will find more help in this volume than in many larger tomes, and may be confident that they are being kept abreast of present-day discoveries.

Considerable additions have been made, and as unessential details had in previous editions been reduced to a minimum, deletions have been rare. The popularity which this book already enjoys will doubtless be retained if not enhanced by the appearance of this new edition.

MANUAL OF SURGERY.

By the late ALEXIS THOMSON, M.D., F.R.C.S. Edin. and Eng., and ALEXANDER MILES, M.D., LL.D., F.R.C.S. Edin. Vol. II., seventh edition. Oxford Medical Press. Pp. 663. 12*s*.

THE second volume of the manual deals chiefly with the locomotor apparatus, the brain, the spinal cord, and special organs. Fractures and dislocations are treated with great thoroughness, and on the rather unusual plan of discussing the injuries of each region separately. From the point of view of systematic description the method is a little confusing, but for purposes of diagnosis there is a certain advantage in describing under one heading all the injuries, for example, that can occur in the region of the shoulder. The whole of this section is profusely illustrated, and the illustrations of deformities are extremely good. The effects of injuries of the skull, and intracranial hæmorrhage, are admirably dealt with, but surely more than three pages might have been spared to the subject of cerebral tumours. The volume contains an immense amount of information in a readily accessible form, and it is particularly well suited to the requirements of the student who wishes to look up information about cases he has seen in hospital. He could hardly find a more convenient volume to assist him in his studies.

BACTERIAL INFECTION.

With Special Reference to Dental Practice. By J. L. T. APPLETON, Jun., B.S., D.D.S., Professor of Microbiology and Bacteriopathology, the Thomas W. Evans Museum and Dental Institute, School of Dentistry, University of Pennsylvania. London: Henry Kimpton. 1926. Pp. 474. 28*s*.

THIS stimulating text-book is intended to give dental students and practitioners a knowledge of the general process of infection and an understanding of the special bearings of this upon dental practice. It is divided into three parts. Part I. treats of bacteriology, together with some very important information upon antiseptics and sterilisation, Part II. of infection generally, and Part III. of the special bacteriology of the regions dealt with by the dentist. This stated arrangement is hardly adhered to; consequently the subject-matter is rather unsystematic, and there is a lot of overlapping between Parts I. and III. The bacteriological descriptions assume that the reader already possesses a fairly comprehensive knowledge of the ordinary morphological and cultural characteristics of organisms, and there is a great deal of information included which has only theoretical importance. Twenty pages are given up to a discussion of classification and two distinct systems are described. In spite of an attempt to include too much, which results in the admission of matter which has only remote bearings upon the main theme, the book is nevertheless an illuminating one. It sets forth information in a broad and sane way and may be read with profit by dental students and by those who have qualified; it certainly represents a level of instruction considerably higher than that which obtains in most of the dental schools in this country.

CANCER: ITS CONTROL AND PREVENTION.

By JOHN F. HALL-EDWARDS, late Senior Medical Officer in Charge of X Ray Department, Birmingham General Hospital. Birmingham: Cornish Brothers, Ltd. 1926. Pp. 88. 2*s*.

THE object of this little book is to control and prevent cancer by educating the public. The author impresses upon his readers that cancer is curable if recognised and treated in its early stage. He describes the various symptoms which may be indicative of cancer in the different organs, and urges the public to seek medical advice without delay when there is any disturbance of health which might possibly be due to cancer. This part of the book, while it contains nothing new, is well and clearly written and can be recommended as sound advice. But the statement on the cover that "the death-rate from cancer could be reduced within two years by 20 per cent. if the public only knew and acted upon the advice given in this book" is not justifiable and is not justified by anything in the text. The author merely repeats on p. 27 that "it has been computed that 15–25 per cent. of the deaths from cancer could be saved as the result of education by intensified propaganda." No explanation is given how this calculation is arrived at, unless it be the example given on p. 41. Dr. Hall-Edwards refers there to the reports of the Radium Institute, where under the heading of "Moles, Warts, Papillomata," 74 cases have been reported as cured by treatment in two years. He goes on to say: "Taking these figures as they stand it is obvious that in two years 74 cases of skin cancer have been prevented"! The naïveté of this argument enables one to understand the author's confidence in the beneficial results of the intensified propaganda which he proposes. In the United States a society for the control of cancer was founded in 1913, and has carried out an active propaganda for many years. During that period the recorded mortality from cancer in the United States has considerably increased.

HEREDITY.

The Theory of the Gene. By THOMAS HUNT MORGAN, Professor of Zoology in Columbia University. New Haven: Yale University Press. 1926. With 156 figures. Pp. 343. 18*s*.

IT was in 1825 that the Earl of Bridgewater, whose monument stands by Ashridge Park, left £8000 to the President of the Royal Society to get written a work "on the power, wisdom, and goodness of God as manifested in the creation"; whence came Sir Charles Bell on the hand, Dr. Roget on physiology, and the other famous Bridgewater Treatises. In 1901 Yale University received a legacy of $80,000 in memory of Mrs. Hepsa Ely Silliman, with which they were charged to procure and publish an annual course of lectures "designed to illustrate the presence and providence, the wisdom and goodness of God, as manifested in the natural and moral world." Prof. Morgan's book is the nineteenth of a series, which includes Sherrington's Integrative Action of the Central Nervous System, Haldane's Respiration, Krogh's Anatomy and Physiology of Capillaries, and, perhaps most significantly, Bateson's Problems of Genetics. For in the dozen years which have gone by since Bateson stated his problems remarkable progress has been made towards their solution, as is shown by this admirable exposition of what Prof. Morgan believes about the gene and why he believes it. The theory of the gene states that the characters of an individual are referable to paired elements (genes) in the germinal material which are held together in groups and arranged in a linear order; that these pairs separate when germ-cells mature and recombine independently according to Mendel's laws; that there may be at times an interchange between the elements in corresponding groups. The gene is a conception based on quantitative experiments and the theory says nothing about its anatomical representation, though there are many facts which make it likely that it is a particle of chromatin occupying a defined place in a series which makes up a chromosome. Prof. Morgan naturally puts his case strongly and, where it is possible, quite definitely, but the particular value of his book is that he faces his difficulties frankly, and those who have read only more popular accounts of modern genetics may be surprised to find that the simplicity and certainty of the matter are not quite as great as they had been led to think. There is indeed a great deal of current confusion about genes and characters and the effects of environment, and we can thoroughly recommend a careful study of this considered statement by a master to any serious student who wants to know the present position. The diagrammatic illustrations are good.

THE LANCET.

LONDON: SATURDAY, JULY 24, 1926.

THE TREATMENT OF INSANITY.

THE meeting of the Royal Medico-Psychological Association, held July 13th–16th under the presidency of Colonel J. R. LORD, proved the existence both within and without the medical profession of a valuable extension of interest in this most important section of medicine. We published last week an abstract of the Maudsley lecture delivered before the Association by Prof. G. M. ROBERTSON, who took as his subject the most practical side of mental therapeutics—namely, the prevention of mental disease, and certain of his words, though not intended so to do, formed an excellent illustration of the grave and delicate responsibilities of the psychiatrist. Prophylaxis might be defined, said Prof. ROBERTSON, as the prevention of an attack of insanity when it threatened but before definite symptoms had appeared, and the anxious position in which the medical practitioner, not necessarily an expert, is placed, when dealing with possibly unstable patients, is well indicated by the definition. How does an attack of insanity threaten before definite symptoms appear? In words which formed a preliminary survey of the whole field Prof. ROBERTSON enumerated the danger signals, and the particular skill of the diagnostician may be said to come in when a difference can be established between a danger signal and a definite symptom. For example, suppose a change of character is recognised by the physician from personal observation, supported or no by a family story. Is this change of character the evidence of an established form of mental disease, or is it only an indication that such disease will be established if preventive measures, and those of the right sort, are not undertaken?

Here we have to consider the fundamental oppositions of view that are found among equally learned psychiatrists as to the inevitability of certain prodromata being followed by sinister sequelæ. A jesting story has it that a parent, having an open mind on religious questions and becoming the progenitor of twins, decided to have one child baptised and the other not, keeping the second one as a control. This is a fair burlesque of the situation which arises in medicine when we desire to prove or disprove the efficacy of any particular procedure; but the medical conscience would not allow the practitioner to offer prophylaxis to certain cases and to withhold it from others in order to ascertain which the right course might be in the future. He must subject all the sufferers alike to what he believes to be the best treatment, and the general practitioner will find that he cannot obtain identical advice from equally competent experts as to where and how to begin prophylactic attention, or even as to whether he should begin it at all. We publish this week, as a Special Supplement to THE LANCET, a symposium on Early Mental Disease, written by a group of well-known authorities, the main object of the Supplement being to answer questions that arise in the minds of medical practitioners who are called in to pronounce on the normality or the certifiability of a patient who has manifested mental instability, disorder or mal-development. The plan on which the collaborators agreed to arrange their contributions was chosen because it appeared to be one in which exact information upon any particular case could be easily obtained, whether the guidance was required for the making of a diagnosis, or for the selection of treatment. Thus the first part of the volume is devoted to the study of those early symptoms which, if persistent and progressive, should lead the practitioner to suspect instability; while the second part gives an account of the psychoses and neuropsychoses met with in practice, and there is furnished here the evidence that certain preludes, if unseen or neglected, result in various forms of disaster. The essays were submitted in their collected form to the late Sir FREDERICK MOTT, whose preface points out that the most important possession for the general practitioner is a knowledge of the signs and symptoms of mental defect or disorder at the earliest possible moment, and who has commended the volume to the medical profession because it should meet many of the anxious positions now existent.

Dr. R. H. COLE, writing on the progress of the medical profession in the practice of psychiatry in this issue of THE LANCET, calls particular attention to the advancement that has been made during the last 30 or 40 years in its teaching. His words have a wide significance. We find specialists regretting the small experience of the general practitioner in medico-psychology, and it is well to be reminded by one of them that it is only during the last generation that the training of the men who enter the medical service of the mental hospitals has been raised to its present standard. To-day we have a large body of experts able to assist the profession generally in the problems that present themselves, but also engaging upon the researches whose outcome will be the psychiatry of the future. At the dinner of the Royal Medico-Psychological Association Dr. GREIG SOUTAR drew attention to the fact that many of the teaching bodies now issue special diplomas in the subject of psychological medicine. This is a proof that while the public attention has been sharply focussed on the administrative side of lunacy, the educational authorities have largely combined to render fine and progressive scientific assistance.

THE NATURAL DURATION OF CANCER.

IN the course of the investigations of the Departmental Committee appointed in 1923 by the Minister of Health to consider available information with regard to the causation, prevalence, and treatment of cancer, certain difficulties have arisen. These are due to the fact that in the study of cancer from the clinical side there exists no well-defined criterion of the success or failure of a method of treatment. When a patient suffering from strangulated hernia has been relieved by surgical operation, he may clearly be said to be cured, since had the operation not been performed he would almost certainly have died within a few days; after its performance the patient, so far as his expectations of further life are concerned, is brought back into the category of the general population of the appropriate sex, age, and occupation. But it is less easy to interpret the word "cure" as applied to more chronic cases. For example, what is the criterion of cure in patients showing the classical symptoms of pulmonary tuberculosis? It would be too severe a test to demand that their average duration of life should be as long as that of a random sample of persons of the same age, sex, and occupation. These considerations have stimulated Dr. MAJOR GREENWOOD to make an attempt to find a basis from which inferences as

to the value of treatment in cancer may ultimately be drawn. In an introductory paragraph to a report on the Natural Duration of Cancer,[1] he deprecates the use of the word "cure" without qualification in assessing the results of treatment of any chronic disease, and suggests that a numerical measure of cure must take account of three quantities: (1) the average duration of life of a person, of the same age as the patient, not known to be suffering from the disease; (2) the average duration of life of a person suffering from the disease and left untreated; (3) the average duration of life of a person suffering from the disease and treated in the manner the value of which it is desired to test. Of these quantities, one only, the average duration of life from any age in the general population, is known at all accurately. The duration of life after treatment is known, but only to a rough approximation, for certain forms of cancer. To collect information on the "natural" duration of life of cancer patients is the object of this report. It is admitted that *really* accurate knowledge of the average length of life of a cancerous process not radically treated can never be had because its onset is often insidious. There are some forms of cancer—for instance, cancer of the stomach—where the earliest indications of disease are almost wholly subjective. But there are other forms, cancer of the breast or of the tongue, for instance, where something tangible, a lump or a sore, is given, and in these our measure of duration, still only rough of course, still probably understated, is of real value. Dr. GREENWOOD believes that it is worth while to seek measures of natural duration at least for cancers of tongue, breast, cervix uteri, rectum, and œsophagus.

The data here analysed were obtained by the courtesy of several hospital staffs and include 4238 cases relating to seven primary sites. From records made by Prof. W. S. LAZARUS-BARLOW (London), Sir GEORGE BEATSON (Glasgow), Dr. S. WYARD (London), Dr. POWELL WHITE (Manchester), and Mr. CARTER BRAINE (London) he finds the mean duration in months to be 38·3, 20·9, 26·7, 16·5, 12·0, 14·5, 16·8 respectively in cancer of the breast, uterus, rectum, tongue and mouth, œsophagus, larynx, and stomach. There is no significant difference between the different sets of averages obtained. Dr. GREENWOOD finds no confirmation of the general opinion of clinicians that age at onset is an important factor. There seems to be little relation between age of onset and duration. The ordinary arithmetic average duration, however, puts the case in too favourable a light, since the existence of a small number of persons who survived a very long time—for example, two breast cases and one rectal case lived over 30 years—has pulled up the arithmetic average. The mean and the median value—i.e., the value midway between the longest and shortest durations—are often far apart. While the actual arithmetic average duration of cancer of the breast is over three years, half the patients are dead within a little more than two years and three months, 25 per cent. do not live more than 18 months, and only 25 per cent. survive beyond four years one month. For cancer of the rectum the difference is less striking; the arithmetic mean duration is only three months longer than the median value.

The significance of the results from the statistical point of view is discussed in some detail. From the material at his disposal Dr. GREENWOOD has constructed a survivorship table, calculating the chances of survival from nought to six years after onset of cancer in each region in untreated cases. Taking cancer of the breast as an example, he shows how from the data of natural duration an attempt to measure the effects of treatment may be made. He is careful to point out that in the present state of our knowledge a certain element of conjecture is involved, and that certain assumptions are inevitable. Accepting these assumptions we have the following summary results. The normal expectation of life of a woman aged 55 is 18·87 years, the expectation of life of a woman with untreated cancer of the breast is 3·25 years, the expectation of life of a woman operated on under "average" conditions is 5·74 years, and of a woman operated on under the best conditions is 12·93 years. To-day the annual quota of new cases of cancer of the breast in England and Wales is probably at least 5000. Not more than half the patients undergo the radical operation and of these fewer than half again are operated on under the most favourable conditions. How many years of life will these 5000 women, on the average, enjoy? 2500 of them will have 3·25 years apiece, 1250 will have 5·74 apiece, 1250 12·93 years each. The grand total is 31,462·5 years. Had each enjoyed the normal expectation, the total would have been 5000 multiplied by 18·87 or 94,350 years. If all had been operated on under the most favourable conditions, the quota of years would have been 64,650, more than 30,000 years of life beyond what they may actually expect. Sir GEORGE NEWMAN emphasises in a prefatory note the advantage enjoyed by those who submit to early operation in this form of cancer. Recent records of cases of women operated upon for undoubted cancer of the breast in various provincial cities, notably Leeds,[2] confirm Dr. GREENWOOD's arresting conjecture that resort to early operation in cancer of the breast would, in the aggregate, add thousands of years to the active life of the nation.

[1] Reports on Public Health and Medical Subjects. No. 33. Ministry of Health. 1926. London: H.M. Stationery Office. Pp. 26. 9*d*.

NURSING HOMES.

A Select Committee, appointed by the House of Commons on March 2nd last to consider and inquire into the question of the inspection and supervision of nursing homes, and to report what legislation, if any, is necessary or desirable, have issued this week a well-considered and prompt report.[3] Evidence was taken not only from medical and nursing associations, but from many engaged with the administration of public health in urban and rural districts, private medical practitioners, matrons and proprietors of nursing homes, and such persons with direct experience as nurses, patients, or visitors. The information from the witnesses was sought in reply to the two questions, whether the general conditions under which nursing homes are conducted render their supervision by a public body advisable, and, if so, how such supervision can be most effectively obtained and exercised.

The difficulty of defining the institutions to be considered was met by a classification under which all nursing homes were placed in five classes, accordingly as they provided accommodation for medical and surgical cases; for maternity cases; for cases requiring special observation and treatment; for senile and chronic cases; and for convalescent cases. It will be seen that under the first two headings we have the usual material of the general or special

[2] A Report on the Late Results of Operation for Cancer of the Breast (Leeds). Reports on Public Health and Medical Subjects. No. 34. Ministry of Health. 1926. London: H.M. Stationery Office. Pp. 20. 6*d*.

[3] Report from the Select Committee on Nursing Homes (Registration). London: H.M. Stationery Office. 1926. 4*d*.

hospital applied to particular people who, for one reason or another, are being treated in private; the functions of institutions for the reception of the last two classes of cases are obvious; but in considering institutions prepared to shelter patients requiring special observation and treatment the report may be called prophetic, inasmuch as, though such places are extremely needed, they are only just coming into existence. All nursing homes may not fall neatly under this classification, if only because patients under two or three of the different classes may, of course, be found under one roof; but the category is a quite adequate one from which to consider the need for supervision, and of this need there seems to be no doubt in the public mind nor in the mind of the Committee. The Ministry of Health was evidently alive to the great difficulty implied in the registration and inspection of maternity homes fulfilling functions in regard to public health and child welfare, for, in the recommendations, special exemption from supervision is provided for publicly controlled institutions, which cannot require the same sort of standardising that might be necessary for private adventures. From the British Medical Association the Committee learned that that body would not object to the registration of nursing homes where the registration authority delegated its duties to a committee upon which both doctors and nurses would be represented, ensuring also that medical records and case-sheets would not be open to lay inspection. The complaints received by the Committee came from doctors—mainly directed to structural and sanitary defects in buildings; from nurses—mainly directed to inadequate accommodation for patients and staff, poor quality of diet, and inadequacy of staff; and from patients—confirming from their aspect the views of the nurses. These complaints were considered by the Committee under the indicated headings of buildings, accommodation, staff, and treatment of patients, and in view of much publicity that has been given recently to the alleged neglect of patients in nursing homes, we would draw attention to one passage in the report: "The Committee do not intend to criticise the work carried out by well-run nursing homes, for it is clear that in many cases the owners or managers of these homes are making the very best of structurally unsuitable buildings."

On such clear-cut issues as could be formulated, the Committee make concrete recommendations which will lead surely to "something being done." They find that legislation to secure registration and inspection of nursing homes should be introduced under the supervision of county and borough councils, with power of delegation to a committee upon which doctors and nurses are represented, the inspection to be carried out by the medical officers of health with technical assistance; the inspection, they hold, should be limited to general questions and should not embrace any inquiry into medical records or the private affairs of patients. They hold that the term "nursing home" should include all types of home—that is to say, maternity homes also—but not any publicly controlled institutions. Charitable organisations, they say, could be exempted by action of the supervising authority for definite periods, but they do not agree that a nursing home should go free of inspection on the grounds of the residence or the control of a medical practitioner. They recommend that appeals against refusal or cancellation of registration should be made to a referee appointed by the Minister of Health, and that all homes, including maternity homes, should be brought under one comprehensive scheme. Action should follow on this report.

Annotations.

"Ne quid nimis."

INTERNATIONAL RED CROSS CONFERENCE ON THE WELFARE OF THE SEAMAN.

BETWEEN June 28th and July 5th an itinerant conference was held in Oslo, Bergen, and Trondhjem with the object of uniting the Red Cross Societies of the world in a movement for bettering the health of the sailor. The British representatives were Mr. L. Bowden, Dr. Butler (of the International Labour Office), Surgeon-Commander L. F. Cope, R.N., Colonel L. W. Harrison, Dr. C. Lillingston, Dr. F. N. Kay Menzies, Mrs. Neville Rolfe, Dr. Norman White, and Mr. Murray-Williams. The aim of the conference, which was organised by the Norwegian Red Cross Society and the League of Red Cross Societies, was to bring together the representatives of the national Red Cross Societies of the maritime countries of the world and certain other organisations such as the International Labour Office, to study the measures already taken in Norway for the welfare of the seaman, and to confer over steps to be taken in the future for his welfare. Of the many items on the agenda, which included the international standardisation of a medicine chest and medical manual for ships not carrying a doctor, that which elicited the most lively discussion was the plan devised by Dr. Harald Engelsen, of the Norwegian Red Cross, for a network of medical stations under the Red Cross for seamen in every port. It was his original intention that the Red Cross should choose one doctor in every port to act as the agent of the Red Cross, putting his surgery at the service of the sick seaman, who would pay the ordinary doctor's charges and who would, if he required specialised treatment, be passed on to a specialist or a hospital where he could receive such treatment. It was argued by Dr. Engelsen in favour of this scheme that the seaman would benefit by having a doctor found for him and guaranteed by the national Red Cross Society of the country; also that the patient would have the advantage of continuity of treatment as he travelled from one country to another in the charge, so to speak, of Red Cross doctors who would be more or less in touch with each other, information as to diagnosis and treatment being carried by the patient from one doctor to another. The Secretary-General of the Norwegian Medical Association (Dr. Jörgen Berner), gave the blessing of his Association to this suggestion, although it entailed granting a monopoly to only one doctor in each port. The attitude of the foreign delegates to the scheme might be described as one of frank, but friendly, criticism. They were agreed as to the desirability of linking up the welfare work for seamen under one single international organisation, such as the League of Red Cross Societies, but they did not see how the Norwegian scheme in its entirety could be accepted by every other maritime country. The first three resolutions, unanimously adopted by the conference, gave expression to this feeling. They were:

1. That bureaux for furthering the health and general welfare of seamen be established in seaports throughout the world in close liaison with, and as a further development of, such national and international action in this field as has already been taken.

2. That each bureau be placed in a prominent position at the water-side. The chief function of these bureaux would be to furnish (*a*) treatment or information as to where appropriate medical advice and treatment can be secured, (*b*) postal facilities such as addresses to which the seaman's letters might be sent, and (*c*) information as to the local recreational and social facilities and sleeping accommodation.

3. That such seamen's bureaux should be distinguished by a common badge of world-wide application.

To assure continuity of future action, the conference adopted as a further resolution, that—

"The League of Red Cross Societies should invite the International Labour Office, the Health Organisation of the

League of Nations and other international organisations concerned to coöperate in appointing a standing committee on the welfare of seamen, this committee to arrange for expert investigation of (*a*) facilities for the medical treatment of seamen (e.g., standardisation of ships' medicine chests, medical manual, a wireless code for medical consultations at sea, education of ships' officers in first aid and in the use of medicine chests, health propaganda among seamen, &c.); (*b*) welfare conditions on board and in port, the provision of recreational facilities for seamen of all nationalities, social conditions in the ports, ships' libraries, films, &c."

It was the general opinion of the delegates to the conference that it had brought to light an important gap in the welfare work for the seaman, and that the Norwegian Red Cross Society, by inviting the sister societies to confer on this matter, had started an international movement which promised radical reforms.

SMALL-POX IN RELATION TO CLIMATIC CHANGES.

DATA for epidemiological studies in tropical countries are not always easy to obtain; India is exceptional in possessing meteorological records and statistics of the incidence of various diseases extending over some 50 years. After prolonged study of this material, of which he is in a position to detect the limitations as well as the significance, Sir Leonard Rogers has arrived at definite conclusions as to the influence of climatic conditions on the incidence of leprosy, tuberculosis, and pneumonia. More recently he has drawn attention, in a paper read before the Tropical Diseases Section of the Royal Society of Medicine, to the relation between absolute humidity and small-pox prevalence in India. He has now expanded this communication into a report[1] to the Medical Research Council, presenting tables, charts, and diagrams which give support to his view that by careful study of climatic conditions in India it is possible to forecast epidemics of small-pox. He finds that the small-pox incidence in India is greatest and most uniform from year to year in Madras, the only province not receiving much rain during the south-west monsoon months from June to October. In all the seven provinces receiving the south-west monsoon rains there is a remarkable decline of small-pox every year at that season, followed by an increase during the ensuing cold and hot dry seasons, once more checked by the next monsoon. Rainfall alone does not explain this great fall of small-pox during the south-west monsoon. The provincial average small-pox incidence shows no relation to the monthly temperature, and none to the relative humidity in the damp areas of Lower Bengal, Assam, and Madras. The absolute humidity (that is, the amount of aqueous vapour as measured by its pressure, a convenient measure of combined humidity and temperature) shows a close relation to small-pox prevalence. It rises to its maximum with the annual decline of small-pox during the south-west monsoon in every province receiving its main rain then. In Madras both the absolute humidity and the small-pox rate are stationary at that season in the absence of the south-west monsoon, while the maximum absolute humidity occurs as early as April and May and is accompanied by the annual moderate early decline of small-pox. The early winter north-east monsoon rains occur during a fall of the mean monthly temperature and of the absolute humidity, thus explaining their failure to prevent the winter increase of small-pox in Madras. Sir Leonard Rogers holds that the influence of high absolute humidity in checking small-pox suffices to explain the seasonal prevalence of the disease in all parts of India. In the less rainy areas of the North-West and Central India, with average absolute humidity during the monsoon of about 0·700–0·800, low absolute humidity during that period is nearly always followed by excess of small-pox in the ensuing dry seasons; while in the areas with heavy rainfall of Bengal and Assam, as well as in Madras, the absolute humidity during the summer, which is very high, reaching 0·800–0·970, has very little relation to small-pox incidence. However, years in which the humidity is low in the autumn, when normally it ranges from about 0·700 to 0·800, are generally followed by excess of small-pox in the ensuing dry months. The only exceptions are that low humidity soon after a small-pox epidemic, which has exhausted most of the susceptible material, may not result in any increase of the disease; while five or six consecutive years of normal or high absolute humidity may be followed by a rise of small-pox, on account of the accumulation of susceptible persons. Sir Leonard Rogers believes that by watching the absolute humidity in India, and possibly in other tropical continental countries, at the season when they normally average about 0·700–0·800, about four-fifths of small-pox epidemics may be foreseen two or three months ahead, in time to enable the public health authorities to issue warnings and to organise additional vaccination staff to cope with and minimise the approaching outbreak of small-pox.

[1] Medical Research Council. Special Report Series No. 106. Small-pox and Climate in India. Forecasting of Epidemics by Sir Leonard Rogers, C.I.E., M.D., F.R.C.P., F.R.S. H.M. Stationery Office. 2*s*.

A MELANOTIC EPITHELIAL ODONTOME.

THE occurrence of a melanotic epithelial odontome in a child of 5½ months has recently been recorded by Mr. J. Howard Mummery and Mr. A. T. Pitts.[1] According to the mother a swelling had first appeared in the front of the maxilla at about one month and had steadily increased in size; at the time of examination it was about the size of a small walnut, and was situated on the anterior aspect of the maxilla in the incisor region, chiefly on the right side. The mucous membrane was stretched over the hard tumour but was freely movable. A radiogram showed that the tumour cast a shadow much less dense than that of bone. A dense patch, evidently calcified, on the left side resembled the imperfectly formed crown of a tooth. There was no sign of the outer alveolar plate in the radiogram. At operation a flap of the stretched mucous membrane was raised over the tumour and it was found that the outer alveolar plate had been thinned to the consistency of tissue paper over the growth but was still complete. This bone was removed as well as the thicker bone over the lateral margin of the tumour, so as to give access to the growth, which was adherent to subjacent tissues only on its deep aspect. Here it was intimately united to the bone, spicules of which passed into its substance, and some force was needed to dislodge the tumour. The cavity was obliterated to some extent by crushing in the expanded bone, and the flap of mucous membrane was sutured into position with catgut. Recovery was uneventful and four years afterwards the only abnormalities were a twisted right lateral incisor and the absence of the right upper central incisor, all the other deciduous teeth being present. The concavity of the anterior surface of the bone above the missing tooth suggested the absence of the permanent right central incisor, and radiograms confirmed this. There has been no sign of local recurrence or metastasis. On examination the tumour proved to be a complex one. It contained calcified bodies, a mass of imperfectly formed enamel, and long columns of enamel organ arranged in layers. A narrow epithelial band was seen at the margin with numerous buds of epithelium extending into the growth, bearing a striking resemblance to a tooth-band with young tooth-buds growing from it. Portions of dental pulp were also seen, as well as some imperfectly formed dentine. The histology of the soft part of the tumour showed the typical structure of an epithelial odontone or multilocular cyst. The smaller cysts were surrounded by epithelial cells, which appeared quite black from the con-

[1] Proceedings of the Royal Society of Medicine, 1926, vol. xix. (Section of Odontology), p. 11.

tained pigment present in the cytoplasm but not in the nucleus. The larger cysts for the most part had no epithelial lining and the contents were in close apposition with the surrounding connective tissue. The pigment was very abundant and gave a blue-black appearance to the central part of the tumour. It contained no iron and was regarded as melanin by the authors, who believe that this case is the first on record in which melanin has been found in an odontome. Considered as an epithelial odontome the growth has other interesting features. The view that these tumours arise from an abnormal development of the enamel organ is supported by its structure. The authors advance convincing arguments in support of their suggestion that the growth may have arisen as an aberration of the enamel organ of the missing permanent incisor. Whatever its origin it is peculiar in its situation, since most tumours of this nature occur in the mandible, and in the small resulting disturbance of tooth development.

THE EX-BABY.

THE discussion on child welfare which took place at Westminster and was reported in THE LANCET of July 17th drew attention to a gap in our organisation for the care of the child. Antenatal and baby clinics provide for help and direction in regard to health up to the time of weaning, but Dame Janet Campbell showed that the "ex-baby" lacks systematised care until school life begins, when the school clinics take up their share in preventive medicine. The good work already done has probably been reflected in improved conditions of children who are not subject to supervision, but we cannot let this probability satisfy us, and the hiatus between babyhood and school age must be bridged. The gap in organisation has a noteworthy linguistic correlate, for Dame Janet Campbell's use of the phrase "ex-baby" is justified by the absence of a current word to specify the infant who is no longer "the baby" and has not yet attained the status of a school child. Yet during this period are being laid the foundations of the individual's character and disposition, upon which will depend his actions and reactions, and, to a great extent, his future happiness and even bodily health. There is a saying, attributed in varying forms to various people, but generally put into the mouth of an eminent theologian, who is credited with declaring that if he could direct the training of a child up to the age of seven he cared not a bit who trained it afterwards. Modern study of the development of character traits, however, leads us to attach more importance to the influence of the family, often unwittingly exercised, than to deliberate efforts to instruct. From these observations it is only a step to the view of Freud that, whatever may be its exciting cause, the foundations of a psycho-neurosis are laid in the first five years of life. Inborn temperament plays a part, but those neurotic reactions in the nature of fear, jealousy, hatred, and the like, which appear so irrational to the observer and yet are subjectively self-sufficient, are but repetitions of childish emotional behaviour. We are so accustomed to our loss of memory for the period when our own reaction modes were being laid down that we overlook the mystery of it. We say we were too young to remember. But any mother can give examples of the wonderful memory of her ex-baby, and the conclusion seems reasonable that we forget because we are too old to remember. According to the psycho-analytic view we forget, or repress, because the period is a time of conflict between primitive wishes and the growing inhibitions against them. Certainly the child who has "his nose put out of joint" by the coming of a "little stranger" will probably never know if a feeling of neglect then experienced was the first of a train of reactions culminating in a general tendency to undue resentment at any rebuff. The only child—who is often a nervous child—may never pass satisfactorily through the stage of dependence upon the parents, and the success of Barrie's best-known play may indicate that the memory of that stage of dependence still attracts both grown-ups and those who have not long passed through the ex-baby phase. Few of us would easily admit that the happenings of that phase had any influence upon our appreciation of Peter Pan. These speculations may appear remote from the subject of the provision of children's clinics, but preventive medicine has a task before it in the "plague of nerves" that interferes with the happiness and efficiency of so many people. If the ex-baby age is that in which are established not only character and disposition, but also the possibilities of later neurotic troubles, then the emotional situation of the child must be studied in conjunction with the purely physical side.

THE TOXICITY OF ZINC.

THE use of zinc as a protective coating for galvanised pipes and cooking vessels, in cosmetics and medicinally, lends interest to the question whether this metal possesses toxic properties. The acute reaction known as brass-founders' ague or spelter chills, due to exposure to vapour of the metal at high temperatures, may be disregarded as resulting from an unusual physiochemical state; but even here chronic manifestations following frequent attacks have not been described. The subject has been approached in two recent articles in both of which literature bearing on it is summarised; but the conclusions drawn are unusually diverse. One of these articles considers the position of workers in galvanising plants[1] exposed to fumes of zinc sulphate and zinc chloride; here the authors report widespread gastro-intestinal conditions, varying from gastro-enteritis in the younger workers to gastric and duodenal ulcers in older men. A period of from 5 to 20 years is thought necessary for the production of these lesions. The experimental work of others is claimed in support of zinc being the causative agent. No such train of events, however, has been described in this country; on the contrary, in one district where galvanising is the staple industry, gastric ulcers, although not uncommon among domestic servants, have been noted not to occur among the factory women.

The second article referred to[2] gives the evidence for considering zinc to be universally present in animal tissues, and present in remarkably similar total concentrations in animals of different species and in approximately constant concentrations in different animals of the same species. The authors deduce from the facts that this metal, instead of being a poison, takes part in normal metabolism of plants and animals. Corn deprived of zinc becomes chlorotic; it acts as a catalytic fertiliser for maize. Animals on a zinc-free diet do not flourish: the zinc content of yolk of egg, milk, and spermatic fluid is high. An understanding of the normal occurence and rôle of zinc is needed when evaluating the effects of abnormal amounts introduced in the course of exposure to industrial processes. The suggestion is certainly new that zinc promotes the efficiency of growth processes.

THE NORMAL BLOOD COUNT.

IF asked the normal number of red cells per c.mm. in the human being, nine out of ten medical men—students or practitioners—would reply, five million. A few, perhaps, would qualify their answer by saying that in the female the count is lower by about 500,000. The universal acceptance of this standard is something of a mystery; but the figure, repeated in text-book after text-book, is the basis for calculating the colour-index. The whole subject of the normal standards for the blood has lately been carefully reinvestigated by E. Osgood,[3] working in Portland, Oregon, and his results are worthy of close consideration. Taking samples from healthy male medical

[1] An Occupational Disease among Zinc Workers. C. P. McCord, A. Friedlander, W. E. Brown, and D. K. Minster. Archiv. Intern. Med., May 15th, 1926.
[2] The Significance of Zinc in the Living Organism. K. D. Drinker and E. S. Collier, Jour. Industr. Hygiene, June, 1926.
[3] Archives of Internal Medicine, May 15th, 1926.

students this worker found that the normal red cell count ranged from 4,400,000 to 6,390,000 per c.mm., with an average of 5,390,000. Counts of more than 6,000,000 occurred six times in the series of 153 subjects, and this finding ought to discourage the custom of reporting all cases with blood counts of more than 6,000,000 as polycythæmia. On investigating the normal standard of hæmoglobin Osgood found even greater confusion. Unfortunately, the vast majority of those who, using their own particular method, report a percentage of hæmoglobin, never stop to inquire on what standard that percentage is calculated. The methods most commonly used in this country are probably those of Haldane, Dare, and Tallquist. These all take 13·8 g. of hæmoglobin per 100 c.cm. as the normal; but the standard for the Newcomer method, on the other hand, is 16·92 g. per cent. Osgood found an average of 15·76 g. per cent. with extreme variations of 13·44 to 19·03. Since the usual standards of hæmoglobin adopted in this country, and the assumed normal of five millions per c.mm. for the red cells, are (according to these observations) both too low, it follows that the normal colour-index, usually taken as somewhere in the neighbourhood of 0·85, is also too low. Osgood found the average colour-index to be 1·00, with variation between 0·84 and 1·21. Very great importance has been attached, and undoubtedly must attach, to the colour-index in the diagnosis of pernicious anæmia. But the results reported above go to show that its significance is very variable in blood counts performed in the ordinary way. "It is necessary," Osgood says, "to convert all hæmoglobin estimations into terms of grammes per 100 c.cm. before calculating colour-indexes, and it would be desirable to have all hæmoglobinometers standardised to read in grammes per 100 c.cm." This conclusion obviously demands the attention of all hæmatologists, whether laboratory workers or clinicians.

THE ACTIVE SUBSTANCE OF THE THYROID GLAND.

ONE of the most interesting communications made in connexion with the joint meeting of the Biochemical Society and the London Section of Chemical Industry, which we report on p. 199 of our present issue, was that of Prof. G. Barger, professor of chemistry in relation to medicine in the University of Edinburgh. In the absence abroad of Dr. C. R. Harington he discussed the progress of the work on the chemistry of the active substance of the thyroid gland since its isolation by Prof. E. C. Kendall in 1919. Prof. Kendall obtained from the gland a crystalline substance, containing 65 per cent. of iodine, which was shown to be the factor through which the thyroid exerts its control over the metabolic rate. The method of extraction was laborious and the yield so poor that for commercial purposes it was essential that a simpler and cheaper method should be devised. Quite recently Dr. Harington, working in the Department of Pathological Chemistry of University College Hospital, has succeeded in obtaining a far better yield. He gave an account of his experiments in the *Biochemical Journal* (vol. xx., p. 300), acknowledging the helpful advice received from Prof. Barger throughout the progress of the investigation. Having noticed certain discrepancies in Kendall's work, Dr. Harington sought to improve on his methods. Prof. Kendall had only succeeded in obtaining a total yield of 33 g. of thyroxine from three tons of fresh thyroid gland. It appeared probable that a considerable proportion of the total loss of active material occurred during the preliminary process of hydrolysis of the gland in sodium hydroxide, so that the first attempts were directed towards finding a substitute for this process. After several experiments, Dr. Harington found that hydrolysis with barium hydroxide appeared to promise more favourable results. Full details are given of his method, which gave an average yield of 0·12 per cent. of thyroxine from the dried gland and 0·027 per cent. from the fresh gland. Having arrived at a practicable method for the preparation of comparatively large quantities of thyroxine, Dr. Harington proceeded to reinvestigate the chemical constitution of the substance. After deciding upon a method for the removal of the iodine from the thyroxine he describes at some length his experiments in the degradation and synthesis of this desiodo-thyroxine, of which the formula is set out in our brief report of Prof. Barger's observations.

Up to the present the orientation of the iodine atoms has not been determined, but experiments indicate that they probably occupy 3, 5, 3′, 5′ positions. The comparison of the physiological action of thyroxine and desiodo-thyroxine will doubtless be undertaken shortly and can hardly fail to lead to considerable advance in our knowledge of the pathological processes at work in the various forms of goitre.

THE LONDON POST-GRADUATE HOSTEL.

THE opening meeting of the Post-Graduate Hostel will be held at the Imperial Hotel, Russell-square, on Monday, July 26th, at 7 P.M., when officers will be elected and rules approved. The objects of the hostel are to welcome medical visitors who come to London, to promote an interchange of ideas by means of conversation and informal addresses, and to supplement and encourage the work of the Fellowship of Medicine and other bodies which arrange for post-graduate instruction. A smoking-room and a reading-room have been set aside at the hotel for residents and visitors, and the rules for their use, which are being proposed, are as simple as possible. It is suggested that the privileges of the hostel shall be restricted to fully qualified medical practitioners; that any such practitioner shall be allowed to dine with the members at the ordinary hotel charges on presenting his card; that a register of attendances and a register of discussions shall be kept; and that informal discussions shall be held from time to time at 9 o'clock in the evening on subjects previously announced in the medical journals. After the business meeting on Monday next there will be a reception at 7.30 P.M., followed by dinner at 8 P.M. At 9.15 P.M. Dr. Alfred Cox will take the chair at an address by Sir D'Arcy Power on the Hostel and its Objects. It is hoped that as many as possible will attend to hear the address even if they cannot dine at the hotel. Ladies and friends of medical men will be cordially welcome. Those who intend to dine on this occasion are asked to inform the management of the hotel in good time. Wide support should be obtained for this attempt to provide a rendezvous for medical men from abroad.

The discussion for Friday, July 30th, will be on the Difference between Inflammation and Hyperplasia, and will be opened by Sir Lenthal Cheatle.

THE Registrar-General's "Statistical Review of England and Wales for 1924" was published this week (New Annual Series, 4) at the price of 5*s.* net from the Stationery Office.

INDEX TO "THE LANCET," VOL. I., 1926.

THE Index and Title-page to Vol. I., 1926, which was completed with the issue of June 26th, will shortly be published. A copy will be sent gratis to subscribers on receipt of a post-card addressed to the Manager of THE LANCET, 1, Bedford-street, Strand, W.C. 2. Subscribers who have not already indicated their desire to receive Indexes regularly as published should do so now.

Modern Technique in Treatment.

A Series of Special Articles, contributed by invitation, on the Treatment of Medical and Surgical Conditions.

CLXXXII.

THE TREATMENT OF URINARY CALCULUS.

CUTTING for stone is an operation of such antiquity and has received so much attention in lay and medical writings that it occupies a somewhat disproportionate prominence in the minds of those who only occasionally see a case of urinary calculus. It will be convenient, therefore, to commence by discussing these cases of stone in which operation is unnecessary or is contra-indicated. It is presumed that in stones of the kidney or ureter an X ray film of good quality has demonstrated the calculus, and in stones in the bladder that this viscus has been examined with the cystoscope. Operation is contra-indicated in large bilateral renal stones. In such cases the destruction of kidney tissue is very considerable, and what is left may be little more than sufficient to carry on the renal function. An operation for the removal of a large branched calculus entails extensive destruction of renal tissue, and may be followed immediately or after an interval by failure of the renal function. Further, it is practically certain that within a few months or at most a year or two the stones will have re-formed. Operation in such cases is only performed where there is severe pain, septic absorption, or obstruction leading to hydronephrosis or pyonephrosis, all of which are rare in this type of calculus. Where there are stones in both kidneys, one kidney being occupied by a large mass of stones and the other being the seat of a small calculus, the small stone should be removed by operation without delay. Such a stone, if impacted in the ureter, is likely to cause calculus anuria, and it is easily removed by pyelolithotomy without destruction of the tissue of the healthy kidney. The treatment of the extensively diseased second kidney will vary in individual cases, but my inclination would be to leave the kidney alone if it were giving rise to no symptoms. When the calculi in each kidney are of moderate size and too large to pass down the ureter, they should be removed by operation. A cutting operation is rarely required in small stones in the kidney or ureter. In stones up to the size of a pea or even larger, where the stone is rounded or shaped like a date-stone, it may pass by the natural channels. At the present time, when early diagnosis by means of the X rays is the rule, these comprise about 80 per cent. of the cases of stone in the kidney and ureter. The small stone that is obvious may so far be the only one formed, or small stones may be formed and passed at frequent intervals. One of the chief arguments against operation in such cases is that the operation does not confer immunity from further stone formation. Recurrence in the future is rather more probable than non-recurrence and operation should, other things being equal, be avoided.

Medical Measures.

The treatment in such cases consists in powerful diuresis, supplemented, if necessary, by the passage of ureteral bougies. Diuresis is best produced by means of one of the natural diuretic waters, such as Contrexèville, Vichy, or Vittel, or a visit may be paid to one of these spas.

The method I usually adopt is based upon that in use at the spas. A bottle of the water is taken before breakfast each morning for a month. One hour before breakfast the patient drinks one-third of the contents of a litre bottle and then takes exercise, preferably walking, for a quarter of an hour. Another third is then taken and followed by a similar period of exercise, and then the final third, with a subsequent period of exercise and a rest before the first meal. During the rest of the day the patient carries on his ordinary routine, exercise being encouraged. After a month of this treatment, a rest is given from the forced diuresis for a fortnight, and then a second course is started. Repeated diuretic courses are given with intervals for a year or more. A course of treatment at one of the spas mentioned lasts three or four weeks, and the spas are open from early May to late September.

Measures to Facilitate the Passing of the Stone.

Should the stone have failed to pass under the diuretic treatment, its discharge may be assisted by dilatation of the ureter and by other means. For this purpose the operating cystoscope, a large catheterising cystoscope, is used. Ureteral bougies of large size are passed up the ureter. These serve to dilate the lumen of the duct and also to move the calculus which may have become arrested in its passage down the ureter by a small fold of mucous membrane. The injection of novocaine through the ureteral catheter to relieve spasm of the ureteral muscle, and of sterile paraffin to facilitate the descent of the stone, may be tried. The vesical orifice of the ureter is the narrowest part of the duct, and this may be incised by fine scissors passed through the operating cystoscope. Where the calculus lies at the ureteric orifice, partly projecting into the bladder, further assistance may be obtained by burning the edge of the orifice with the high-frequency cautery, and the stone may be moved by means of fine forceps. Where the stone lies near the bladder, bimanual massage of the lower ureter by means of the finger in the rectum or vagina, and the second hand above the pubes, should be tried. These methods are of value where the stone lies at the brim of the pelvis or in the pelvic segment of the ureter. They are used in combination with, or followed by, the diuretic treatment. The discharge of the calculus is facilitated by their use, but the patient should be warned that there is no absolute certainty that the stone will come away, and that no definite time for its discharge can be given. It is a matter open to discussion as to how long a stone may safely be allowed to remain in the ureter or renal pelvis.

If pain and hæmaturia have been excited by exercise, and the patient's activity is being seriously curtailed, or his business interfered with, and the non-operative methods have failed, it is better after waiting six months or a year to remove the calculus by a cutting operation than to leave it. If, on the other hand, the stone is causing only slight symptoms there will be disinclination on the part of the patient to have any operation done. It must, however, be remembered that the stone will increase in size and complications will arise that change for the worse the prognosis for cure after operation, and on this account operation should not be delayed indefinitely.

Operations for Stones in Kidney and Ureter.

There are certain indications for the removal by cutting operation of a small calculus in the kidney or ureter—namely, urinary infection, dilatation of the renal pelvis, and anuria. Dilatation is diagnosed in the early stage, before extensive destruction of the kidney has taken place, by means of pyelography. A calculus of the kidney or ureter which is unsuitable for treatment by diuretic or manipulative methods should be removed by cutting operation. Before carrying this out it is necessary to obtain information in regard to the second kidney. The two most common dangers in regard to the second kidney are the occurrence of stone in this kidney also and impairment of the renal function by sepsis. A complete X ray examination of both kidneys and ureters and the bladder should therefore be made in every case of urinary calculus. A specimen of the urine of the second kidney should be obtained by passing a ureteral catheter, and examined by estimating the percentage of urea and cultures made from the bacteria.

Pyelolithotomy.—The removal of a stone from the kidney should, if possible, be carried out by an

incision through the wall of the renal pelvis (pyelolithotomy) in order to avoid destruction of the renal tissue. For this operation the stone must lie in the renal pelvis, it should be of moderate size and without branches, and it must be possible to manipulate the kidney so that the posterior wall of the pelvis is exposed.

If the stone lies in a calyx, its position should be carefully demonstrated by means of the X rays and felt by means of a probe passed through the convex border of the kidney, so that a small incision can be made directly upon it through the renal cortex. Branched stones are removed through the renal cortex by an adequate incision, and the cavity in which they lie thoroughly cleared out by irrigation and swabbing. Where there is a large branched calculus and the kidney is infected, and the second kidney is normal, nephrectomy will be the best treatment.

Operations for Stones in the Bladder.

Small stones in the bladder can be removed by the evacuating cannula and bulb used in litholapaxy.

Litholapaxy.—The operation of choice for stones in the bladder is crushing (litholapaxy). In skilled hands the operation is rapid, and the convalescence short, and there is less danger than in a cutting operation. Litholapaxy is contra-indicated where there is severe cystitis, enlarged prostate, diverticulum of the bladder, or growth of the bladder. If the stone is a very large one, it is better removed by suprapubic cystotomy, and if there is severe sepsis of the kidneys bladder drainage by cystotomy is an important method of treatment of the kidney condition, so that this method will be chosen for the removal of the stone. If the surgeon has few opportunities of treating stone in the bladder, he will probably choose suprapubic lithotomy as the operation best suited to his attainments. When the prostate is enlarged or a growth or a diverticulum is present, the main surgical procedure consists in the removal of these conditions and the extraction of the stone is an incident in the operation.

Provision against Recurrence.

Having removed a stone from any part of the urinary tract, the question of providing against recurrence must arise. In such cases careful dieting should be carried out. This will usually be concerned with the reduction of oxaluria or of uric acid crystals in the urine. In any case foods which irritate the urinary tract, such as alcohol, pickles, asparagus, strawberries and acid fruits, curries, peppery foods and strong coffee should be cut out from the dietary. Several courses of diuretic waters such as I have described above, and a visit to a diuretic spa once a year for a few years should be prescribed.

JOHN THOMSON-WALKER, M.B.Edin., F.R.C.S.,
Senior Urologist, King's College Hospital;
Surgeon, St. Peter's Hospital for Stone.

DONATIONS AND BEQUESTS.—Mr. Arthur John Pownall Brocklehurst, of Minehead, Somerset, and late of Macclesfield, left £5000 to the Macclesfield Infirmary and £1000 to the Minehead and West Somerset Hospital.—Miss Mary Ethel Sim Scharlieb, B.A., Harley-street, W., left, on the death of her mother, £4000 to the University of London for founding a scholarship in memory of her mother, to be called the "Mary Scharlieb Research Scholarship."—Mr. John William Larkin, Crown House, Brentwood, Essex, besides other bequests, gave £1000 each to the London Hospital and the British Home and Hospital for Incurables, Streatham, £500 to the Brentwood District Cottage Hospital, and £200 to the Brentwood Nursing Association.—Sir Squire Bancroft, besides many other bequests, gave £1000 to the Middlesex Hospital for a Squire Bancroft bed, and £1000 to the Chelsea Hospital for Women, for a Lady Bancroft bed.—The Royal National Orthopædic Hospital, Great Portland-street, W., has received £500 from the estate of the late Mrs. R. I. Scorer by direction of the King by his Sign Manual.—The Manchester Royal Infirmary has received a legacy of £1000 from the executors of the late Mrs. Elizabeth Kirkham.—Various medical and other charities in the Rochdale and Oldham district as a result of the annual sports of the Rochdale County Police will receive amongst them £1200, making a total of £5000 during the last four years.

Special Articles.

BRITISH MEDICAL ASSOCIATION.

ANNUAL MEETING AT NOTTINGHAM.

THE ninety-fourth annual meeting of the British Medical Association opened at Nottingham on July 16th, when the Representative Body met at 10 A.M. in the Mechanics' Hall, with Dr. H. B. Brackenbury in the chair.

Municipal Welcome.

At 11 A.M. the Mayor of Nottingham, Alderman Charles Foulds, accompanied by the President-Elect, Mr. R. G. Hogarth, senior surgeon to the Nottingham General Hospital, visited the meeting to welcome the Association. He remarked that its last visit had been in 1892, the year in which he had come to live in the town. He referred to the changes which had taken place during the intervening 24 years and to the amenities of Nottingham as a health resort. In particular was the city proud of its open spaces, which occupied nearly one-seventh of its total area. Dr. Brackenbury acknowledged the welcome and expressed the pleasure of the Association at revisiting the city.

REPRESENTATIVE MEETING.

FRIDAY, JULY 16TH.

After the usual formal business, Major-General Sir Alfred Blenkinsop and Group-Captain N. J. Roche were elected to the Council for the period 1926–29 as representatives respectively of the A.M.S. and R.A.F.M.S. A message of condolence was sent to Dr. Milner Moore, one of the "fathers" of the Representative Body, who was prevented by ill-health from attending the meeting. It was agreed that the annual meeting in 1928 should be held in Cardiff, and that Sir Robert Philip, M.D., F.R.C.P.E., should be President of the Association for the year 1927–28. Dr. J. F. Hall-Edwards, a martyr to radiological research, was elected an Honorary Member of the Association in recognition of his services to medicine.

In moving the adoption of the annual report of Council, Sir Robert Bolam referred to the gift of £1000 by Mrs. Bishop Harman to establish a prize for research into the troubles incident to child-bearing. He showed a gold and enamel badge of office presented anonymously for the use of the Chairman of Council and announced that the Council had also received a silver inkstand from Dr. A. E. Wynter, son of the Editor of the *British Medical Journal* from 1855-61; a silver jug from the South Australasian branch; and a bust of Hippocrates from Messrs. H. K. Lewis. The Council had decided to present the gold medal of the Association to Sir Humphry Rolleston in recognition of his scientific work and his services to the profession and the Association.

Sections at the Scientific Meeting.

The Representative Body then considered three proposals to enlarge the scope of the scientific meeting. Brighton proposed the institution of a section of the history of medicine and were supported by Edinburgh, which was particularly anxious that it should be inaugurated on the occasion of the Association's visit to Edinburgh next year, which will coincide with the Lister centenary celebrations. Edinburgh also proposed sections of venereal diseases and radiology. Sir Robert Bolam and Dr. Brackenbury both pointed out that the Representative Body had never hitherto interfered with the arrangements for the scientific meeting. It was the custom for the Arrangements Committee, composed of six local members and six nominated by the Council, to advise from year to year what sections should be held.

It was agreed that the Council be requested to consider the desirability of instituting a Section of the History of Medicine at the annual meeting, and of

forming Sections of Venereal Diseases and of Radiology at the meeting to be held in Edinburgh in 1927.

Financial Position.

The Treasurer, Mr. Bishop Harman, in moving the adoption of the annual report under "Finance," said there was a balance in hand of £783 6*s.* 4*d.* The balance of £8000 last year had been swallowed up by non-recurring expenses such as the equipment of the new building and the demands of the Scottish House. There was now no loan nor overdraft at the bank. There had been during the last few years a steadily progressive increase both in the income and in the expenditure due to the great increase in membership. An increase of £2600 in the general expenses account was due to the delegations to America and South Africa and legal expenses incident to the lease of the new house.

Funds for Research.

Dr. F. C. Martley spoke of the importance of spending more money on pure science, since the first object of the Association was the advancement of science. Apart from exceptional years, such as the one just concluded, an average profit of £6000 might be looked for, and it was scandalous to spend only £1000 on research. Dr. J. W. Bone pointed out that much of the general expenditure of the Association was for scientific purposes in connexion with the *Journal* and with the work of many of the committees, such as that on the causation of puerperal morbidity and mortality. It was not just to regard the money set aside for research grants as all that was devoted to science. Dr. E. B. Turner pleaded for more money for research work. The *Journal* nearly paid for itself, and the money used to finance it could not be regarded as an expenditure on science. There was also scope for many more British Medical Association lectures. Dr. D. Lawson said that £10,000 a year would be a suitable sum to spend on science, and suggested raising the money by an increase in the subscription.

Remuneration of Laboratory and Research Workers.

The scale of salaries laid before the Representative Body last year was passed as the established policy of the Association. This scale states:—

(*a*) That whole-time (1) non-professorial medical teachers, and (2) medically qualified laboratory or research workers should be grouped into three grades as defined below, and with the salaries as stated:—

Grade III.—Comprising those who are junior workers temporarily employed on probation; no person shall remain in Grade III. for more than three years.

That the minimum salaries for Grade III. shall be as follows: 1st year, £300; 2nd year, £350; 3rd year, £500.

Grade II.—Comprising laboratory or research workers or teachers who have had three years' experience in Grade III. or in work of a similar character, and who are permanently and exclusively employed as such. That the minimum commencing salary for Grade II. shall be £600 per annum.

Grade I.—Comprising those of Grade II. whose qualifications or duties justify a position of seniority in status and a higher remuneration. That the minimum salary for Grade I. shall be £750 per annum. That after the probationary period (i.e., Grade III.) has been completed, dismissal should be possible only on grounds of neglect of duty, improper conduct, or incapacity.

(*b*) That non-professorial medical teachers and medically qualified laboratory or research workers holding part-time appointments should receive remuneration for the time engaged, at the rate of not less than £600 per annum.

Amendments by the St. Pancras division and the Dundee branch, seeking to exempt from this scale posts where there were special scientific or other advantages outweighing the financial, and small hospitals or schools where the drain would be serious, were rejected, the Chairman of Council and the Chairman of the Science Committee strongly urging the members not to weaken the policy of the Association in any such way. Sir Robert Bolam said that the Council's duty was to execute the policy of the Representative Body with discretion, and any case of real hardship would be sure of sympathetic consideration.

Present Strength of the Association.

The Chairman of the Organisation Committee announced that the membership of the Association had now reached 31,600, an increase of 2000 on last year and of 25 per cent. during the last three years. He referred to the success of the Handbook for the Newly Qualified, a new edition of which had recently been brought out. Three new divisions had been organised during the year. The Australian branch was doing well, and in Canada there had been very gratifying results of the affiliation carried through last year. It was hoped to do something in the near future to improve the position of the medical profession in India.

Locum Bureaux.

The recommendation from the Bath meeting, authorising the establishment of Locum Bureaux under B.M.A. auspices, had been investigated, but it had been found that such bureaux would be unremunerative for a very long time and would necessitate considerable expense. Their establishment had, therefore, been given up in favour of an agreement with an existing organisation, which would obviate any technical or legal difficulties.

The Medical Profession in South Africa.

Dr. Morton Mackenzie sketched briefly the difficulties encountered in South Africa, where until recently two separate associations had existed, the British Medical Association and the South African Medical Association. The consistent policy of the Council had been to seek for the unity of the profession and as the result of an organising tour by Dr. A. Cox amalgamation of these two bodies had been secured.

Dr. K. B. Alexander of East London, Dr. H. W. Dyke of the Orange Free State, Prof. J. W. C. Gunn of Cape Colony, and Dr. E. A. Seale of the Cape of Good Hope, all spoke of the high appreciation in South Africa of Dr. Cox's services. Motions were passed welcoming the amalgamation, congratulating the leading members of both the South African medical bodies on the statesmanship shown, and wishing the new Medical Association of South Africa (British Medical Association) every success.

The Science Committee.

Dr. C. O. Hawthorne, Chairman of the Science Committee, in proposing the adoption of the remainder of the annual report under the heading "Science," remarked on the increasing number of applications for scholarships and grants in aid of research, to the important work carried out by scholars and grantees, to the investigation into the Spahlinger treatment, and to the Sir Charles Hastings clinical prize for general practitioners. The 1926 prize had been awarded to Dr. Norman Porritt, of Llandudno, for a study entitled the Abdomen in Labour. A high level of excellence was reached in the 20 clinical studies submitted. The report on rheumatic affections in childhood would doubtless prove the starting point of new enterprise, investigation, and research.

During the course of the day the following ten members of Council were returned unopposed: Dr. G. B. Hillman (Wakefield, Pontefract, and Castleford), Dr. I. W. Johnson (Bury), Dr. D. G. Greenfield (Northamptonshire), Dr. A. W. Nuthall (Birmingham), Dr. E. B. Turner (London), Dr. W. Paterson (London), Dr. H. C. Bristowe (Bristol), Dr. A. Lundon (Guildford), Dr. C. E. Douglas (Fife), Dr. J. G. McCutcheon (Glasgow), and Dr. J. Mills (Connaught).

SATURDAY, JULY 17TH.

Mr. McAdam Eccles, Chairman of the Hospitals Committee, proposed and carried on behalf of the Council:

That in all cases of accident where medical attendance is given at a voluntary hospital, and such medical attendance is covered either directly or indirectly by insurance, the hospital authorities should recover from the insurance company the full cost of maintenance and treatment of

such patient. That where patients who would ordinarily be considered as private patients are admitted to hospital solely on account of accident or emergency, they should be considered as "private patients."

A discussion followed on the motion:

That case-sheets and records of patients treated in hospitals should remain in the custody of the hospital; that they must be regarded as confidential documents and access to them allowed solely to the members of the visiting staff of the hospital.

Dr. H. C. Bristowe, on behalf of Bristol, proposed an amendment by the addition to the motion of the words:

and such other members of the medical profession as have the express permission of the visiting staff.

Harrogate proposed to amend it by adding the words:

and through the medical staff to the ordinary medical attendant of the patient, if that medical attendant so desires and the patient gives consent.

Both amendments were lost after some discussion. Mr. McAdam Eccles and Sir Robert Bolam deprecated any weakening amendment. Mr. H. S. Souttar and others pointed out the difficult position of a visiting physician or surgeon who felt that he might at some time be compelled to show up his notes; he would probably keep two sets, one for inspection and one for his real opinions of the case. The original proposition was carried.

Consulting Staffs of Poor-law Hospitals.

Mr. McAdam Eccles proposed:

(i.) That the minimum fee per visit of a consultant called in to a Poor-law patient in a Poor-law hospital should be £2 2*s*., with mileage in addition where necessary, and (ii.) that the minimum fee for each operation performed in such circumstances should be £5 5*s*.

An amendment by St. Pancras, recommending the addition of the words "the fee for a major operation being not less than £10 10*s*." was carried, and the substantive motion, with this addition, was passed by the requisite two-thirds majority to make it the policy of the Association.

Passing to the question of regular contracts between consultants and Poor-law authorities, as opposed to sporadic attendances, Cardiff proposed:

That the Council be instructed to consider the appropriate conditions of annual contracts for visiting consulting staffs of Poor-law hospitals.

Dr. E. E. Brierley, in bringing forward this motion, said that many annual contracts were being instituted, and that at present the hospitals policy of the Association gave no guidance as to the terms on which these should be arranged. At the rates suggested in the motion just passed, the income of a surgeon who regularly attended a Poor-law infirmary would be quite likely to reach £2000 a year from that work alone. Dr. L. G. Glover, in withdrawing a similar motion by Hampstead in favour of the Cardiff one, remarked that in his division a local surgeon who was frequently called into the infirmary for operations had felt that his usual fees were more than the ratepayers ought to be called on to pay, and that Hampstead therefore desired the establishment of some definite scale.

Dr. E. R. Fothergill proposed, and Dr. E. W. G. Masterman seconded, an amendment:

That where the remuneration of a consultant for regular periodic visits for either of these services is on a salary basis it should be a matter of arrangement between representatives of the local medical profession and the local authority, but should have regard to the minimum fees mentioned above.

Dr. F. Radcliffe said that divisions would be placed in a position of difficulty in making arrangements with local authorities unless they could have definite guidance as to what fee they should ask. Dr. J. D. Ewart said that the motion passed gave guidance and the conditions varied so enormously that there must be absolute freedom. Dr. R. St. Leger Brockman (Sheffield) remarked that in some places an appointment to the infirmary brought in private work as did a hospital staff appointment. He supported the amendment. The amendment was referred to the Council for consideration.

Medical Attendants in Cottage Hospitals.

Dr. F. A. Roper proposed on behalf of Exeter that the paragraph of the hospitals policy which states that "As far as possible, every patient in a cottage hospital should have the right to be attended by his usual medical attendant" should be amended by the addition of the words:

He should be responsible to his medical attendant for fees in the same way as he would be outside the hospital. Where the patient has ordinarily paid mileage, such charge should be excluded, a suitable fee for each attendance being that which he would pay for attendance at the doctor's residence.

He said that in the big hospitals the staff were mainly dealing with other people's patients; they reaped their reward in experience and prestige. The cottage hospital was quite different; it was a small place to the staff of which every local practitioner belonged, and these practitioners could expect no gain from the appointment. They sent their patients in for them to get nursing facilities unobtainable in their own homes, and not for specialist advice.

After some discussion, Dr. Roper withdrew the second sentence and his motion was carried as follows:

That the following be added to paragraph 41 (Section XVI.) of the Voluntary Hospitals Policy: He should be responsible to his medical attendant for fees in the same way as he would be outside the hospital.

Psycho-Analysis.

Dr. L. A. Parry proposed, on behalf of the Sussex branch:

That the Council be instructed to investigate the subject of psycho-analysis and report on the same.

He said that the motion on similar lines which was referred to Council at Bath last year dealt with certain improper practices alleged to be carried on in the name of psycho-analysis. This year's motion had nothing to do with that; it dealt with psycho-analysis as a whole. The Central Ethical Committee had given the other motion a long, patient, and considerate hearing, but had decided not to do anything. On Dec. 31st of last year the *Times* had a leading article on the subject of psycho-analysis, one of the contentions being that it was time for the British Medical Association to inquire into this question and to relieve the anxiety felt by members both of the profession and of the public. The correspondence which followed was almost unanimous to the same effect. Sussex had again approached the Council, who had asked them to bring the matter before the Representative Body. A reason brought against forming a committee of inquiry was the danger of interference with liberty of action, and of setting up a standard of orthodoxy. What Sussex wanted was nothing of the kind; they only asked for a committee of sufficient standing to inquire into the whole subject. The Committee on Rheumatic Diseases of Children had not been accused of setting up a standard of orthodoxy or interfering with liberty of action, and they wished psycho-analysis investigated in just the same able way. Not only was there a professional demand for such an inquiry, there was also a public demand. It was time that there was a committee to decide how much harm and how much good there was in the method.

Dr. R. Langdon Down said he was glad Dr. Parry did not propose to deal with the suggestions of improper practices. He urged the meeting to try to picture what the proposal really meant in practice and to ask whether psycho-analysis were a suitable subject for treatment by a committee. The Committee of Rheumatic Affections in Children illustrated in a practical and concrete way the difference between the two things; in that the members were dealing with knowledge and experience on which the profession had common grounds of agreement. In psycho-

analysis there was so far no common ground of agreement; it was the topic which most acutely divided professional opinion to-day, and a pretty committee they would get. Dr. Parry hoped for a definite pronouncement; he congratulated him on his sanguine temperament. Psycho-analysis had as yet no fixed foundation; it was at the growing point of medical theory and was totally inappropriate for committee methods. It was much more properly dealt with by debate and report such as the Royal Medico-Psychological Association had instituted, so as to try and sift the truth from the falsehood. The mere definition of the term would lead to a prolonged wrangle. Dr. Parry had said there was a public demand, but not whether the profession as a whole was longing for direction and advice. He was out to condemn in advance and not to search for knowledge. What was the committee to do when it had formed the opinion Dr. Parry hoped for? Was it to excommunicate those who did not agree? In the long run that which was false would drop out and that which was true would stand; it would be no credit to set up a committee which might throw doubt on the truth. The safeguard of the public in such matters, where enthusiasm was likely to carry people away, was to go to their ordinary medical adviser and their interests would be well looked after.

Dr. R. G. Gordon (Bath) said that a committee was already in existence under the auspices of the National Council for Mental Hygiene, and these were the proper people to represent all those interested in the mental welfare of the community, including, as they did, some of the best legal and social services in the country. Undoubtedly there had been some abuses, but these were chiefly due to the practice of psycho-analysis by laymen, which everyone would agree was extremely dangerous, but not within the control of the B.M.A. In a few years the abuses would fall into the limbo they deserved, partly as a result of the condemnation of the medical profession, but still more through that of the lay public. Dr. W. Muir Smith (Eastbourne) said that the Sussex branch had not receded an atom from their original position and their object was to condemn the unnecessary emphasis of psycho-analysis on the sexual aspect of the question. Dr. C. O. Hawthorne reminded the meeting that Dr. Parry was a man with a past in this matter; last year his point had been that criminal practices were so common that it was the duty of the B.M.A. to express condemnation. That had been refused, and now by an ingenious manœuvre he had transferred the matter to the department of the Science Committee from that of Medical Ethics. Dr. Muir Smith had said plainly that those charges were not withdrawn, and clearly no reputable practitioner of psycho-analysis would sit on a committee so long as that slur on psycho-analysis remained. Dr. W. Douglas said he saw no reason why the public should not be told what psycho-analysis was and what it did. Dr. H. D. Woodroffe (Norfolk) spoke on behalf of the general practitioner, who was more affected than anyone else. Dr. Langdon Down had said the public should go to the practitioner for guidance, and it was up to the Council to investigate for the practitioner the questions on which he had to give this guidance. Dr. Fothergill said that the work of psycho-analysts emphasised only one aspect of medicine, and was doing harm.

Dr. R. C. Buist (Dundee) reminded the meeting that the B.M.A. was a scientific association and had to realise the ways in which it could work scientifically, and asked whether the appointment of such a committee was a way of working scientifically. In science one was not out for an opinion but for knowledge, and knowledge in this subject did not at present exist. What Dr. Fothergill desired was not an open-minded committee but one in which he could destroy psycho-analysis.

Sir Robert Bolam said that there seemed to be some feeling that the Council was likely to obstruct investigations desired by the Representative Body; past history gave no colour to this. The Council was willing to attempt any task laid upon it by the Representative Body, and if it found itself unable to carry out their instructions it would come back and be discharged. Dr. Buist had put a very important point. The committee required by Dr. Parry did not ask at all the present value of psycho-analysis, which was what the general practitioner wanted to know, but committed its members to an investigation of which he, the speaker, could not see the end. Was the scope of the committee within practical grasp, and had the time come when it was possible to expect any result from its labours?—Dr. Parry, in reply, said that this year's motion must not be judged by last year's, and that he was not satisfied to wait until he was an old gentleman; he wanted the matter settled now.

The motion was carried by a majority of 56.

The General Medical Council.

Dr. J. S. Manson proposed, on behalf of St. Helens and Warrington:

That the Representative Body notes with satisfaction that the Council has given consideration to the recent Press agitation against the General Medical Council, but regrets that the Council, representing as it does the bulk of the profession, did not see its way clear to make a statement on behalf of the profession; further, that in the event of a renewal of the agitation, this meeting instructs the Council to issue a statement concerning the relationship of the profession to the public and asserting its confidence in the General Medical Council.

Dr. Manson said that he wished this motion had come from one of the more important divisions. He stigmatised the behaviour of the Council during the recent newspaper attack on the General Medical Council as "oriental passivity" in a serious matter affecting the prestige of the profession, and compared it with the Council's activity when the capitation fee was threatened. It might at least have shown approbation of the labours of others—for instance, Dr. Graham Little's skilful controversy in the Press. A statement would not be enough to neutralise the campaign which had been carried on, and should be an initial step only in a defensive campaign of the B.M.A. in favour of rational medicine. Nobody resented fair criticism, but that of the Press was not fair, but simply a brazen attempt to make the G.M.C. accept unqualified practice.

Dr. R. Langdon Down said that there was misapprehension as to the relation between the G.M.C., the profession, and the B.M.A., and already enough confusion between the two bodies. It would only be adding to this if the B.M.A. took the G.M.C. under its wing and tried to defend it against the world. The G.M.C. was quite capable of its own defence. It was most important that the B.M.A. should not take sides; the G.M.C. was a judicial body and the B.M.A. ought not to identify itself with the judge in its courts. It was easy to introduce an amplifier into such an agitation as that in the Press recently and to prolong the noise unnecessarily; the Council had been well advised to let the thing blow itself out.

Dr. J. L. Livingston said that to satisfy the people who felt something ought to be done the public misapprehension might be removed. He moved that the resolution be amended to read as follows:

That the Representative Body notes with satisfaction that the Council has given consideration to the recent Press agitation against the General Medical Council and, in the event of a renewal of the agitation, this meeting instructs the Council to issue a statement concerning the relationship of the profession to the public.

This was seconded by Dr. H. C. Duffy, of Bolton.

Sir Robert Bolam said that the amendment was very different from the motion. The Press was not omniscient, and he thought they had now found that much of their information had come from sources that could only be described as tainted. The Council had not felt that, until the eyes of the Press were opened, they could enter the arena, nor was it their duty at any time to champion the G.M.C.

Dr. J. W. Bone objected to instructing the Council to issue statements under hypothetical circumstances.

Dr. Livingston's amendment was carried as an amendment, but when put as a substantive motion was lost.

Appeal from the Decision of the G.M.C.

Dr. C. L. Morgan proposed, on behalf of Hastings:

That in the opinion of the Representative Body, if and when the status, constitution and disciplinary powers of the General Medical Council come under consideration for amendment, the Council should take all possible steps to have provided the opportunity for an appeal being made to the courts from any disciplinary decision of the General Medical Council.

He said that if the powers of the G.M.C. were to be reviewed it was the time for the Council to consider the matter of appeals. Hastings thought that miscarriages of justice might occur and that there should be some appeal.

Dr. C. G. H. Morse proposed an amendment by Bournemouth:

That the Council of the Association be instructed to take the necessary steps for securing such amendment of the Medical Acts as shall provide for a right of appeal from the decisions of the General Medical Council (say, for example, the Judicial Committee of the Privy Council, sitting with Medical Assessors) when such body acts in a judicial capacity in cases of alleged "conduct infamous in a professional respect."

He drew attention to the fact that two separate divisions had come independently to the decision that there should be some appeal; it was merely the right of any British citizen. His division had little doubt that the right decision was nearly always arrived at, but those who read the reports would feel that miscarriages did occur. There had been sufficient evidence in the last half year that the G.M.C. did not hold the confidence of the public nor of the profession as it ought to. If there were a court of appeal which upheld the decisions of the G.M.C. its prestige would be enormously increased. Since the G.M.C. was established, with that blunderbuss accusation of "infamous conduct," things had profoundly changed. With the National Health Insurance Act and the Dangerous Drugs Act practitioners had come much more into the public eye and under public control, and into increased danger of accusations. He did not think that the right to appeal would be abused; the man who would appeal would be the decent fellow who had made some little slip and who felt justice had not been done; the rotter, who did not wish to conform, would not lodge an appeal. There was no reason why the G.M.C. should be wholly medical, although it was preponderantly so. The appeal suggested was on points of law, but could not be to the ordinary courts; there must be one or two medical assessors sitting with the judge.

The Chairman suggested that members of the General Medical Council who were present should tell the meeting exactly what happened when penal cases came before that body and the deliberations were conducted in camera for a time.

Later, Sir Jenner Verrall said that it was curious that the phrase "infamous conduct in a professional respect," which had aroused so much criticism, had been perpetuated in the most recent development of professional judicature—the Medical Act of Queensland. He did not think it right for him to express any opinion on the motion, but hoped that, if any court of appeal was pressed for, it would include medical men. No profession was so difficult to understand as the medical, and he suggested strongly that the General Medical Council was quite as capable as an ordinary jury of deciding medical questions. Ordinary appeal law laid it down that the appeal should be decided by one judge; he thought it would be most unwise, unfortunate, and dangerous to submit medical matters to such an eventuality.

Dr. J. A. Macdonald said that after 15 years of experience of the General Medical Council and of the extraordinary care with which cases were considered, he felt sure that the profession could not be in better hands.

Sir Robert Bolam said that he had gone to the G.M.C. with a superficially-formed idea that he would enter as a young and ardent spirit to a collection of old fogies; he had found nothing of the sort. In the chair was one of the acutest minds in the profession, a successor of equally eminent minds, surrounded by men of widely differing temperaments, grades of opinion and experience; by no means mere academicians. He did not know what the complaint was; if it was that the G.M.C. were too severe he would remind them that it consisted of men who had trained generations of medical students and had experience of their difficulties. Most of the members were nominated by the bodies which examined and licensed the profession. Why was a change desired? He urged the meeting to think very seriously before plunging into the maelstrom of Parliamentary procedure.

Mr. W. E. Hempson, the solicitor, in reply to a number of questions, said that the procedure of the Council was peculiar to itself; evidence was in the form of statutory declarations. The deposers had to swear, or declare solemnly and sincerely, that the matter in these declarations had been proved. The respondent had the advantage in that he was not compelled to answer the charges on oath, or indeed in any form at all. The speaker objected to the terms "prosecution," "defendant," &c., which were so often used. The words should be "inquiry," "complainant," "respondent." The Penal Cases Committee sifted the evidence before the cases were heard, and acted as a kind of Grand Jury.

The Chairman, in reply to a question, said that of course if appeal were allowed it would cut both ways and the complainant could also appeal.

Dr. Radcliffe asked whether it would be possible for an appeal court to impose a monetary or other penalty beyond the only penalty of the G.M.C.—removal from the Register.

Sir Jenner Verrall replied that appeal would probably only be a question of rehearing, but it would of course depend on the nature of the tribunal set up.

It was finally agreed to pass to the next business.

Dr. J. W. Bone, opposing a motion by Willesden,

That the Representative Body is of opinion that the time has arrived when the Medical Acts should be amended so as to provide for a larger direct representation of registered medical practitioners on the General Medical Council, and that it be an instruction to the Council to take all possible steps with a view to bringing this into effect,

said that the Medico-Political Committee had gone into the matter fully and had decided that any attempt to alter the constitution would arouse the opposition of the Privy Council, Parliament, and the public. The General Medical Council was always being stigmatised as too powerful, and any disturbance of its present form would arouse an agitation which would result in the whole thing going into the melting-pot, with a risk of the profession losing the privilege of disciplining its own members.

The motion was rejected.

Minimum Salaries for Public Health Medical Officers.

In moving the recommendation of Council:

That the Representative Body strongly urges all divisions and branches in England and Wales which have not already adopted a resolution under their ethical rules in relation to the scale of minimum commencing salaries for public health medical officers to take steps forthwith for the adoption of such a resolution,

Dr. R. Langdon Down said that it was much better for a division to adopt a principle before a concrete case arose, as it was then in a much stronger position in expressing disapproval.

The recommendation and the remainder of the annual report under "Medical Ethics" was approved.

During the day it was announced that Dr. H. B. Brackenbury and Dr. C. O. Hawthorne had been returned unopposed as Chairman and Deputy-Chairman respectively of the Representative Body.

(To be continued.)

THE SCIENTIFIC AND INDUSTRIAL PROBLEMS PRESENTED BY THE HORMONES.

A JOINT meeting of the Biochemical Society with the London Section of the Society of Chemical Industry was held on July 20th, Sir ALFRED MOND, M.P., occupying the chair.

The Chairman, in his introductory remarks, referred to the hormones as the natural drugs of the body and said that the part played by these agents in the body had certain analogies with that played by the vitamins in the assimilation of food. He referred to the prominence of British workers in the scientific investigation of the hormones and in the manufacture and control of insulin, and quoted a statement made by a German scientist to the effect that British insulin was the most reliable product on the market. He emphasised the interconnexion between all forms of science and said that the fact that a division into sub-branches was a necessity should not blind us to the fact that science was an indivisible whole. Success could only be achieved by coöperation between industrial and laboratory workers. In the absence of this coöperation, one or other must eventually suffer. There was, he thought, a modern tendency to ignore the fact that fundamental advances were always made by the thinker and inventor rather than through commercial enterprise.

Dr. H. H. DALE read a paper on the

Experimental Study and Use of the Hormones.

He began by a general review of the recent developments in the science and practice of the treatment of disease. Amongst the most important of these was the discovery of the hormones and their use, both in the treatment of disease and in the maintenance of normal health and development.

Suprarenal Gland.—Dr. Dale gave a brief account of the discovery of the active principle of the suprarenal gland and of its mode of action. This, he said, closely resembled the effects on the different organs of the skin and viscera produced by the nerves of the true sympathetic system. In every direction the visceral reactions were such as to prepare the organism for combat or flight. In addition to this emergency function, the constant presence of traces of this hormone in the blood was necessary for the maintenance of healthy tone in the peripheral blood vessels, and therewith of an adequate supply of well-regulated nourishment to the tissues. In therapeutics, apart from its action in relaxing the bronchioles in spasmodic asthma, adrenalin was mainly used in surgery for its local vaso-constricting action. Adrenalin was the first of the hormones to be separated in a state of purity. It proved to be a relatively simple aromatic amine, difficult to work with only on account of its ready oxidation. Its synthesis soon followed. The problem of its origin in the body, however, still remained to be solved.

Dr. Dale then referred to the functions of the suprarenal cortex, of which he said little was known beyond the fact that its activity was in some way connected with the development of sexual maturity.

The *thyroid gland* furnished the earliest and most successful example of treatment by administration of a missing hormone. Long before the identification of the active principle, it was recognised that absence of the gland or defect of its secretion led to retardation of oxidative metabolism, with resulting myxœdema or cretinism. The activity of the gland was also known to be roughly proportional to its iodine content, but it was not until about ten years ago that the active iodine containing hormone was first isolated in pure crystalline form by Kendall in America, and named by him "thyroxine." Recent investigations by Dr. Harington had shown the way to its preparation in practicable quantities.

Dr. Dale briefly described the properties of thyroxine, which, he said, was an intensely active substance, with an action which, in contrast to adrenalin, was slow in developing, but persisted for some time. The intravenous injection of 10 mg. of thyroxine would raise the metabolism of an individual 45 per cent. above the normal rate by the fifth day. The effect did not subside completely for a fortnight.

Pituitrin, insulin, and secretin were either protein derivatives or closely associated with them; they were therefore sensitive to the action of proteolytic enzymes and were rapidly destroyed by autolytic enzymes appearing in the glands containing them immediately after the death of the animal. For the same reason, unlike thyroxine, they had little action when given by the mouth.

The *pituitary gland* consisted of two portions, the anterior and posterior, with different morphological origins and functions. The active constituents of the anterior lobe had not yet been separated. The posterior lobe yielded an extract with a powerful vaso-constrictor action; it also acted on the muscle of the uterus, and hence was invaluable in obstetrics. The commercial preparation of the drug was relatively simple, provided the material was fresh, as an extract of high potency could be obtained by simple extraction with boiling acidified water. The separation of the active principles of the posterior pituitary, in order to study their chemical nature, presented many problems of extraordinary difficulty, largely owing to the enormous quantity of the raw material which was required to obtain an adequate quantity for such work.

Pancreas and Insulin.—Dr. Dale went on to discuss the possible causes for the failure of all the earlier attempts to separate the active principle of the pancreas. He attributed this failure partly to the difficulty in removing the insulin from the destructive influence of the pancreatic trypsin, and partly to the probable presence in the pancreas of other principles having an antagonistic action, and therefore needing elimination. Another factor was probably the ease with which the insulin falls out of solution at a reaction of pH 5. Insulin could now, he said, be obtained in a state of relative purity and intense activity. Prof. Abel, of Baltimore, claimed to have isolated insulin as a pure crystalline substance, but it was as yet too early for final judgment of this claim. The separation of insulin had already thrown a flood of new light on the intermediary metabolism of the carbohydrates, and on the inter relation between insulin on the one hand, and adrenalin, pituitrin, and thyroxine on the other.

Biological Standardisation.—Dr. Dale then referred to the necessity for accurate dosage, and mentioned the disastrous results of a lack of uniformity in biological standardisation, emphasising the necessity for adoption of internationally valid units both for pituitrin and insulin.

Dr. Dale, in conclusion, said that coöperation was not only essential between the manufacturer and the laboratory worker, but also between the workers themselves, and he asked whether competition was really inseparable from industry in matters of this kind. As an instance, he quoted the manufacture of parathyroid. There was, he said, not more than enough material in the country to keep one small manufacturing laboratory going; it therefore did not seem worth while to split up the limited amount of raw material at our disposal, as this was uneconomical and merely meant that in the long run we should have to procure our supplies from abroad.

Dr. H. W. DUDLEY read a paper on the

Chemistry of the Pituitary Gland and of Insulin.

He dealt first with the practical difficulties encountered in the attempts to isolate these principles. In the first place there was the cost of the raw material, which was almost prohibitive to the acquisition of adequate quantities. He calculated that in order to

prepare 100 gr. of the pure active principle of the posterior lobe of the pituitary, it would be necessary to work up material from 1,000,000 oxen. In the case of insulin the same situation prevailed, although the raw material was more easily available. On turning to the chemical investigation of these substances, difficulties arose owing to their extreme complexity and instability.

Pituitary Hormones.—By treating the posterior lobe of the pituitary with faintly acidulated boiling water a filtrate could be obtained which contained substances which made plain muscle contract, and which caused a rise in blood pressure. The question as to whether these effects were produced by one hormone or by two was as yet undecided, but Dr. Dudley inclined to the view that there were two active substances with a very similar chemical constitution. The plain muscle-stimulating substance had the following properties: it was destroyed by boiling with strong mineral acids and rapidly inactivated by dilute alkali; this led to the view that it might be an ester. It was not destroyed by pepsin, but was destroyed by trypsin, which led to the belief that it might contain the peptide linkage characteristic of proteins; this view was strengthened by the fact that it was not inactivated by the ester splitting enzyme lipase. The literature contained records of crystalline salts having been prepared, but these observations had not been substantiated. Probably an apparently pure crystalline substance could adsorb a sufficient quantity of hormone to render it physiologically active.

Insulin.—This substance was prepared by extraction with aqueous alcohol which precipitated most of the protein, higher concentrations of alcohol finally precipitating the crude insulin. This could be further purified by various methods, a convenient one being the precipitation of insulin as an insoluble picrate, which can then be converted into a soluble hydrochloride. Such preparations, though very potent, were by no means chemically pure. They gave many of the usual protein reactions and contained from 12 to 15 per cent. of total nitrogen. They also contained organically bound sulphur, but so far this sulphur content had not been correlated with the physiological activity. Recently Prof. Abel had suggested that a portion of the total sulphur was actually an index of the physiologically active hormone present. He had also announced the preparation of a crystalline substance which he considered to be pure insulin. Dr. Dudley concluded that the properties of insulin were all in keeping with the view that it was a protein-like substance, or, at any rate, a substance associated with a protein fraction in such a way that hydrolysis of the protein inactivated the insulin.

Mr. F. H. CARR read a paper on the

Commerical Production of Hormones.

He first discussed the preparation of insulin in all its stages. The collection of the raw material was a most important point. The pancreas, immediately after excision from the animal, was trimmed to remove all other tissue, and it was then quickly frozen. This was done by placing the glands in thin layers in a room of which the temperature was −5°, or colder. Rapid freezing was procured by circulation of cold air. He described the means by which this was done, the air being dried at the same time by means of calcium chloride. The raw material was then rendered acid in order to stabilise it; this was done by a method of grinding with continuous incorporation of acid and alcohol. As the grinding could not be done without the generation of heat, special methods had to be employed, by which the grinding was done in two stages, between the first and second of which alcohol was incorporated. The final result of this stage was a fairly stable product containing 65 per cent. of alcohol and having an acidity of pH 3·5. Filtration and clarification were then carried out. The next stage was that of concentration. Here again time was an important factor, and the method of vacuum evaporation had proved the most satisfactory. The insulin was then purified by fractional separation by precipitation with alcohol or other protein precipitant. Purified insulin was insoluble in water at pH 5, but was relatively soluble at this point when other associated proteins were present. Insulin was also precipitated by half saturation with ammonium sulphate at all reactions, but the purification of the mixture of albumoses so obtained was difficult. The ultimate purification of insulin was done by precipitation with picric acid and subsequent regeneration as the hydrochloride as suggested by Dr. Dudley. In large scale operations there was always a loss of insulin during the various stages, and determinations of pH, alcohol percentages, and blood-sugar reducing power must be made from time to time in order to insure success. Mr. Carr then described briefly the preparation of thyroxine, which was done by Harington's recently published method. This consisted in hydrolysing the gland in two stages, first with 10 per cent. and then with 40 per cent. baryta water; the gland was then further treated with aqueous caustic soda for 15 minutes. The two liquids so produced were boiled with strong baryta for 18 hours, leaving an insoluble precipitate of a barium compound of thyroxine. The same precautions should be used in collecting and storing the gland, as were indicated above for when discussing the pancreas. The advantages of thyroxine were the ease with which its purity could be determined and the accuracy of the dosage.

Dr. H. A. D. JOWETT read a paper on the

History of Adrenalin.

He said that adrenalin was up to the present the only hormone whose chemical constitution had been finally established beyond all doubt by its synthetic production. The medical and physiological importance of the suprarenal glands was realised by Addison in 1849, but it was not until 45 years later, in 1894, that Oliver and Schäfer observed the rise of blood pressure resulting from intravenous injection of suprarenal extracts. As a result of this discovery suprarenal extracts then began to be used as hæmostatic agents. Successful isolation of the hormone was accomplished by Takamine in 1901, the active principle, which he named adrenalin, being precipitated by the use of a large quantity of strong ammonia. The formula was determined in 1901 by Aldrich. In 1903 Pauly confirmed this formula and found that adrenalin was optically active, and in 1904 Jowett finally established the constitutional formula. Synthetic production of the base in 1903 was accomplished by Stolz from catechol. The resulting adrenalin was optically inactive. The next step was then to resolve the synthetic racemic adrenalin into its optical isomers; this was effected by Plack in 1908. It appeared that *d*-adrenalin was not entirely inactive, but the ratio of activity between the *d* and *l* isomers was 1–15. The synthetic process had now been worked out on the commercial scale, and synthetic adrenalin was sold under the name of suprarenin synthetic. A considerable amount of work had been done on allied problems, and methods for determination and detection of adrenalin had been worked out. Other methods of synthesis had also been tried. In conclusion, Dr. Jowett said that very little was known as to the way in which the suprarenal gland synthesised adrenalin, but that the working out of the constitution of the hormone paved the way for an attack on this problem.

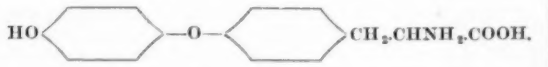
Prof. G. BARGER read a paper on

Recent Progress in the Chemistry of Thyroxine.

Thyroxine, he said, is a crystalline active principle of the thyroid gland, first isolated by E. C. Kendall.[1] The method of isolation was recently enormously improved by Harington,[2] who obtained a yield more than 20 times that of Kendall. Harington further showed that the substance has not the formula $C_{11}H_{10}O_3NI_3$ attributed to it by Kendall, but

[1] Jour. Biol. Chem., 1919, xxxix., 125.
[2] Biochem. Jour., 1926, xx., 293.

$C_{15}H_{11}O_4NI_4$. He established the constitution of desiodothyroxin by degradation and by synthesis as



Of this substance thyroxine is a tetra-iodo substitution derivative; the position of the four iodine atoms has not been ascertained.

Prof. Barger showed lantern slides to illustrate the effects of the administration of small quantities of thyroxine to cases of myxœdema, and to cretins. He also showed photographs of a completely thyroidectomised cat, surrounded by white mice, to illustrate the complete apathy induced by this condition.

Dr. J. W. Trevan's paper on the Biological Assay of Hormones was not reached on the programme.

PARIS.

(FROM OUR OWN CORRESPONDENT.)

Cryptotoxins.

VINCENT has been engaged in studying the neutralisation of tetanic and other toxins by sodium salts of the fatty acids, such as oleic, margaric, and palmitic acid. He finds that these salts, especially sodium palmitate, combine with the toxin and render it harmless. He has worked with the toxins of tetanus, diphtheria, typhoid, dysentery, and other affections. The quantity of sodium palmitate required for neutralisation is minute, 1/100 mg. neutralising 100 lethal doses. Sodium palmitate forms a very stable combination with the toxins, which are not merely adsorbed. The toxins are not destroyed by combination, but may be released by careful titration with an acid (HCl). The term cryptotoxin has been coined for these new substances. They produce a certain degree of immunity when repeatedly injected. The palmitate of sodium is said to be not only antitoxic in the way described, but bactericidal for bacilli of cholera, typhoid, diphtheria, dysentery, and for many other bacteria.

Death of Teissier.

The Faculté de Médecine sustains a severe loss in the death of Joseph Teissier, well known for his work in pathology, general medicine, and infectious diseases. He was chief at the Claude Bernard Hospital at Paris, which is devoted to the isolation and study of contagious diseases. Exacting and thorough as a teacher, Teissier impressed all who came in contact with him as a profound and perfectly independent student. He was a clinician par excellence. His students will remember his bedside demonstrations with appreciation, and he leaves, at the Faculté, a place which will be difficult to fill.

An Anæsthetic Mixture.

Desgouttes and Ricard, of Lyons, find that a mixture of ten parts ether, seven parts chloroform, and three parts ethyl chloride is admirable for general anæsthesia when given with a closed apparatus, such as the Ombredanne mask. It must be given in large quantities if administered by the open method. With the Ombredanne mask, 30 g. of the mixture suffices for 35 to 40 minutes. The index on the mask should be gradually moved up, to reach 5 or 6 in about ten minutes. It should rarely be moved higher than 6. The anæsthesia so produced is tranquil and undisturbed, the post-anæsthetic stage passes off with but little vomiting, and pulmonary complications are minimal.

Immigration and Disease.

The General Council of the Seine has referred a Bill to its Third Committee proposing health examinations of all persons filing naturalisation papers in France. This proposal does not go very far towards relieving the French hospitals of their burdens, for relatively few of the foreigners cared for are naturalised or have any idea of seeking French citizenship. The problem is a vexed one, for large cities in any country must care for the sick poor of whatever nationality. The establishment of a strict sanitary frontier would be far more effective than the insufficient provision mentioned above.

Resolutions against Alcoholism.

Prof. M. Labbé has presented to the Académie de Médecine the results of exhaustive studies made by him on the abuse of alcoholic beverages in France. The Académie, after considering Labbé's report, has forwarded resolutions to the French Government, which demand stricter regulation of alcoholic beverages, control of absinthe and its substitutes, reduction of the privileges now granted to wine and liquor producers, encouragement of the use of non-fermented grape and fruit juices, and a campaign of popular education.

The Paris Municipal Council has just reported favourably upon a resolution to provide financial aid for hospital interns affected with tuberculosis. French interns are employed by the Assistance Publique, and are therefore Government employees.

Legislation is being prepared for active suppression of small-pox in France. It refers to more frequent revaccination, and includes rigid regulations for either vaccinating or exacting proof of an effective vaccination from all foreigners entering France.

A post-graduate course in dermatology will be held at the Hôpital St. Louis, Paris, under the direction of Prof. M. Jeanselme, from Oct. 4th–30th, and a course in venereal disease from Nov. 3rd to 27th. Particulars may be had from Dr. Burnier at the hospital.

A new Cancer Institute at Paris is to be erected on a site at Villejuif, one of the suburbs of Paris, and will be directed by Prof. Roussy.

On July 4th a meeting in honour of the memory of Thomas Jonnesco was held at the Faculté de Médecine. Jonnesco was formerly prosector at the University of Paris, and Levaditi was one of his pupils.

The Services.

ROYAL ARMY MEDICAL CORPS.

THE undermentioned Cols., late R.A.M.C., to be Maj.-Gens.: H. P. W. Barrow, and to be supernumerary; D. Harvey, and to be supernumerary; and J. S. Gallie, vice Maj.-Gen. J. R. McMunn, to ret. pay.

Lt.-Col. E. P. Sewell, from R.A.M.C., to be Col., to complete estabt.

Lt.-Col. A. E. Hamerton to be Bt. Col.

The undermentioned Majs. to be Lt.-Cols.: N. E. Dunkerton, vice Lt.-Col. O. W. A. Elsner, to ret. pay; and Bt. Lt.-Col. P. J. Hanafin, vice Lt.-Col. W. A. Woodside, to ret. pay.

TERRITORIAL ARMY.

2nd Lt. J. G. Morgan (late Tank Corps) and J. H. Donnelly to be Lts.

INDIAN MEDICAL SERVICE.

Col. F. H. G. Hutchinson to be Maj.-Gen.

Capts. W. P. Hogg, Vaman Raghunath Mirajkar, and Mohamed Mossa Khan to be Majs.

The King has approved the grading as Captain of G. H. Fitzgerald.

Wajid Ali Khan to be Temp. Lt.

WEST AFRICAN MEDICAL STAFF.

Dr. M. B. Hay has been appointed to be a Senior Sanitary Officer in the West African Medical Staff, for service in the Gold Coast, as an addition to the establishment.

ROSS INSTITUTE AND HOSPITAL FOR TROPICAL DISEASES.

ON July 15th the Prince of Wales opened the Institute now established at Putney as a memorial to the work of Sir Ronald Ross and as a centre for research and treatment. The appeal for such a memorial was issued in 1923, but the promoters found it by no means easy to secure a suitable building. The freehold of Bath House, a modern mansion standing on the edge of Putney Heath, was eventually acquired, and under the scheme of Mr. G. Berkeley Wills, F.R.I.B.A., three research laboratories, two wards, and a library have been installed. The house has enough ground of its own to permit further extension if need be, and it overlooks pleasant country.

The work of the Institute has already begun. Its main purpose will be intensive research into the prevention and treatment of tropical disease, but it will also serve as a propagandist centre for handing on information to workers abroad and for stimulating control work in malaria and other tropical and subtropical diseases. Unlike the schools of tropical medicine, the Ross Institute will not be a teaching centre; but medical men home from the tropics will be allowed the use of the laboratories for research.

His Royal Highness was received by the Duchess of Portland (the President) and by Sir Charles McLeod (chairman of council), who presented an address of welcome recording the many benefactions received from business houses in all parts of the Empire, from Overseas Governments, and from the general public. The proposal to found such an institute, he said, had met with immediate and sympathetic response from leading members of the medical profession in Great Britain, the United States, France, and Italy. To continue the work of the Institute in fullest efficiency the committee was appealing for continued support to meet current expenses and also for the creation of an adequate endowment fund.

The Prince of Wales, in opening the Institute, said: "The opening of this Institute, which I am very glad to perform, commemorates a definite achievement in the work which the British Empire has done for civilisation. Not the least important obligation which the development of that Empire has laid on the members of our race is the constant struggle against disease in all the varied forms it can assume in different climates and in different latitudes. The struggle is always fiercest in the tropics, where man, and especially the white man, is the continual prey of diseases from which we in this country are, comparatively speaking, protected by a more temperate climate; and perhaps the saddest page in the whole history of our Empire is that which tells of the terrible toll taken by plague and by fever of those who helped to build it.

"Of all these tropical enemies, malaria has probably been the most deadly and elusive. But now, thanks to the achievement of one man, whose name we are perpetuating in this Ross Institute, its ultimate defeat is certain. Only a few months ago I was able to see in the Sir Alfred Jones Laboratory in Sierra Leone not only the vital need for a campaign against malaria but also the remarkable progress which has already been made in it. Perhaps I am biased by many visits to tropical and subtropical parts of the world where malaria is rife, and by having talked with so many men and women whose health has been shattered by a life's work in such districts, but I can think of no other single discovery in recent times which will earn the deep gratitude of so many thousands of human beings of all nationalities as the discovery made in India by Major Ronald Ross—as he was then—on August 20th, 1897. The story of its subsequent development and of what it has led to is well known to you all. I need only summarise it in the words of a famous writer: 'It is not too much to say that Sir Ronald Ross has made one-third of the world inhabitable.'

"Over a quarter of a century has elapsed since that epoch-making discovery, and this Institute and Hospital now stands as a memorial to the life-work of Sir Ronald and his colleagues. But it is not merely a passive memorial to work accomplished in the past; it is also, as Sir Charles McLeod has just reminded us, a very active centre for work to be done in the future. All who have any experience of the tropics will know that there is still a vast field for scientific medical research, and here, with all the sources that modern science can provide, such research can be effectively carried out, provided adequate funds are forthcoming. From this building may issue results which will bring back health to thousands who have lost it, or safeguard the lives of countless others threatened by unseen dangers in tropical lands. More than that, it may open out, for the use and benefit of mankind as a whole, huge districts which are at present denied to civilisation.

"It is not surprising, therefore, that when the scheme for founding this Institute was first put forward it immediately received widespread public support. That support happily made its inception possible, and once the first financial obstacle was surmounted its promoters lost no time in making it a reality. To the President, the Duchess of Portland, to Sir Charles McLeod and Mr. Shakespeare, and to Sir Ronald and his two co-directors, Sir William Simpson and Dr. Castellani, the gratitude of all of us is specially due for the time and energy they have devoted to its execution. They and their fellow-officers of the Institute may well feel proud of the result of their labours and of the knowledge that they have called into being something which cannot fail to be of incalculable benefit to many generations.

"It is with the sincere hope that further public support for the necessary endowment may be forthcoming, and that the labours of those who will work here may be blessed with every success, that I now declare the Ross Institute and Hospital open."

A vote of thanks to the Prince of Wales was proposed by the Duchess of Portland and seconded by Sir Ronald Ross, director-in-chief, who said that the Prince's words would bring vividly before everyone in the British Empire some sense of the terrible loss which malaria inflicted on the world and some idea of the need to overcome it. On behalf of his associates he acknowledged the ready and generous assistance given by more than 1000 contributors headed by His Royal Highness; no fewer than 15 tropical dependencies and eight rulers of States had helped. Sir Ronald Ross said that he was particularly grateful to the Prince for the kind way in which he had referred to his work; hundreds of workers in the field of tropical medicine had done their bit. He himself could only expect to view from afar the promised land of a perfectly sanitated world, but, at least the Institute could be left in the best possible condition for future use as a centre for study and a home of sound research.

POPLAR HOSPITAL FOR ACCIDENTS.—Last week the Lord Mayor of London (Sir William Pryke), who was accompanied by the Lady Mayoress and the Sheriffs, opened a new nurses' home, which has cost £30,000, at this hospital. The Lord Mayor recalled that the hospital was originally housed, 70 years ago, in the buildings of the old Custom House.

GRANTS FOR LOCAL SERVICES.—According to a statement made by Sir John Utting to the Liverpool Port Sanitary and Hospital Committee, the city will lose £110,000 a year if the Government carry out their proposal to replace the 50 per cent. grants for local services by block grants. Liverpool is spending £180,000 a year on tuberculosis alone—according to Sir John Utting, 50 per cent. more than any other municipality. The change would involve either an addition of 4*d.* to the rates or a curtailment of the tuberculosis work.

Correspondence.

"Audi alteram partem."

THE R.S.M. AND BIBLIOGRAPHIES.

To the Editor of THE LANCET.

SIR,—I have received notice from the Royal Society of Medicine that the library staff will in future provide references and bibliographies on request from any Fellow. The reason for this arrangement is doubtless that practitioners and provincials cannot find time to visit the library, but can read books forwarded to their homes. To object to authors being content to accept references at second-hand is perhaps overscrupulous, and possibly medical literature would not suffer from the arrangement provided the authors actually read the articles in the lists supplied. The arrangement lends itself, however, only too easily to the practice of spuriously embellishing articles with references which the writers have not taken the trouble to verify and read critically themselves. Many who have examined literature must have suffered from such meretricious adornment of articles, particularly in American journals; and in America the arrangement is common. Surely any advantage likely to accrue to British medical literature from the arrangement cannot counterbalance the exposure to this abuse.

I am, Sir, yours faithfully,

London, July 14th, 1926. HUBERT M. TURNBULL.

NON-SPECIFIC PROTEIN INJECTIONS IN CHRONIC ARTHRITIS.

To the Editor of THE LANCET.

SIR,—Dr. M. B. Ray's comments in THE LANCET of July 17th upon this subject are of great interest, and his reasoned explanation of the cause of arthritis and the rationale of its relief is very instructive. Our views, though not identical, have much in common. It is agreed that the fault lies partly in imperfect breaking down of chemical substances by the cells and the consequent presence of irritating intermediate products in the fluids of the body. The abnormal products can be destroyed by increasing the oxidative power of the cells, and in this fever plays an active part. Faults of elimination through the skin are too important to be ignored; it is to delayed correction of skin lethargy that the familiar "bath reaction" of which Dr. Ray speaks is due. When the inertia of the skin is overcome and adequate sweating is produced this reaction disappears.

I am, Sir, yours faithfully,

London, W., July 17th, 1926. C. E. SUNDELL.

HEART DISEASE AND EPILEPSY.

To the Editor of THE LANCET.

SIR,—To THE LANCET of July 10th Dr. Moon contributed an interesting and suggestive note on this subject. Obviously he is not aiming at treating it exhaustively as he makes no mention of the association between paroxysmal tachycardia and epilepsy, of which his wide clinical experience must have afforded examples—relatively rare as is this association. It has been of interest to me since the year 1903, when I published notes of a case in Vol. XXI. of the *Transactions* of the Royal Academy of Medicine in Ireland. In brief, the case was that of a girl, aged 14, with a family history of epilepsy, the subject of frequent minor and occasional major fits, and of attacks of paroxysmal tachycardia intermingled, seeming to replace the former. At the time I could find no detailed record of this association, merely that paroxysmal tachycardia had been called fancifully "epilepsy of the heart." My next case was that of a gentleman, aged 60, whose epilepsy had disappeared for 16 years till convalescent from an operation. He was then suddenly seized by paroxysmal tachycardia lasting till I saw him some hours later, when it ceased instantly with "vagus compression." Three days afterwards he had a severe epileptic fit.

From these and other cases which I have observed, or heard of, in which this association was more or less intimate, it would seem that, in a certain group, some common factor underlies both conditions, probably a neurotic one; and that this factor may manifest itself as paroxysmal tachycardia purely. Certain it is that cases of this condition are met with in neuropathic subjects, with a probable family or personal history of fits, who do not develop demonstrable cardiac lesions other than the paroxysmal arrhythmia, and with whom one gets the surer therapeutic results by discounting the heart symptoms and treating as for epilepsy, without suggestive mention of that dread name.

In exemplification of Dr. Moon's observation of how well a damaged heart can deal with the strain superimposed by epilepsy, I can recall the case of a gentleman who was under my care for ten years. He reached the age of 70 (and may still be alive) despite the fact that from his early twenties he had major fits that never relented in their incidence for longer than a month, and who from boyhood had pronounced aortic regurgitation, evidently produced by some acute, but non-progressive, infection.

I am, Sir, yours faithfully,

R. TRAVERS SMITH, M.D., F.R.C.P. Irel.

London, W., July 16th, 1926.

NEW DANGEROUS DRUGS REGULATIONS.

To the Editor of THE LANCET.

SIR,—In THE LANCET of June 19th attention was drawn to certain proposed new regulations concerning dangerous drugs. At a recent meeting of the Council of the National Medical Union the following resolution, which speaks for itself, was carried unanimously:—

"That the Council of the National Medical Union, after careful consideration of the whole subject of the proposed new Dangerous Drugs Regulations, takes strong exception (1) to the proposal to set up a tribunal composed of three medical practitioners and one legal assessor to deal with cases of infringement of the regulations, instead of these cases being dealt with, as at present, by the ordinary courts; (2) to the proposal to empower the Home Secretary to withdraw from medical practitioners found guilty by the said tribunal the right to possess and even to prescribe dangerous drugs, such penalty having the effect of making it impossible for such medical practitioners to continue in practice; (3) to the proposal to make the Home Secretary the final authority without right of appeal to the courts of law, which proposal is contrary to the basic principles of British justice; (4) to the proposal to place upon non-dispensing practitioners the obligation of keeping records of their purchased supplies of the dangerous drugs, on the grounds that the properly made out prescription or order, which is retained by the wholesale or retail chemist, contains all necessary information and is sufficient safeguard."

The National Medical Union lodged a strong protest against the new regulations within the time required under the Rules Publication Act, and the Home Office has a statutory duty to consider their objections.

The attempt which is being made in various directions to bring the members of our great profession under bureaucratic control must be met at once and resisted to the utmost, otherwise we shall find ourselves before very long as pawns in the hands of incompetent officials and Government inspectors. Evidently the Home Office has found that it has not always been able to secure a conviction when bringing cases before the courts. With the new regulations in force no doubt this difficulty would be partly overcome. There is no reason why medical practitioners who break the law should be dealt with without proper trial in a court of law. I shall be glad if medical practitioners who are interested in the matter will kindly communicate their views to me.

I am, Sir, yours faithfully,

S. G. ASKEY,
Hon. Sec. of the National Medical Union.

11, Chandos-street, Cavendish-square, W., July 19th, 1926.

MARSEILLES BRITISH MERCHANT SEAMEN'S HOSPITAL.

To the Editor of THE LANCET.

SIR,—In 1924 I appealed, through the press of Great Britain, for funds to complete and open the above hospital. As a result of the response we were enabled to complete the building, and the hospital is now ready to receive patients. A representative of His Majesty's Office of Works recently inspected it and gave a very favourable report both as regards the sums expended and the nature of the work accomplished. Provision exists for 60 beds which, as things are at present, is more than sufficient for the needs of the seamen for whom the hospital has been built, and the Executive Committee have, therefore, arranged to take in private patients who may require treatment when passing through Marseilles and whose contributions will materially assist in the cost of maintenance. Her late Majesty Queen Alexandra, our patroness, took a keen interest in the hospital. In token of our gratitude, and with His Majesty's permission, the Executive Committee have decided to re-name it the Queen Alexandra Memorial Hospital (Marseilles). The building fund is practically exhausted and, while there is no debt, the Committee do not feel justified in actually opening the hospital without a satisfactory balance to meet the initial running expenses. They are, therefore, appealing for a sum of £5000, and immediately this is forthcoming the hospital will be opened, and, it is hoped and believed, satisfactorily meet a need which has long been felt by the merchant seamen who visit the port of Marseilles as well as by such travellers from the Far East and others for whom there may be accommodation.

Subscriptions should be sent to Mr. F. C. Goodenough (chairman, Barclays Bank), Hon. Treasurer, Queen Alexandra Hospital (Marseilles), Barclays Bank, 54, Lombard-street, E.C. 3.

I am glad to be able to announce that their Royal Highnesses the Duke and Duchess of York have graciously consented to become patron and patroness of the hospital, and I am authorised to say that this appeal has their warmest sympathy and support.

I am, Sir, yours faithfully,

SPENCER S. DICKSON,
H.B.M.'s Consul-General, Marseilles,
Chairman of the Executive Committee.

July 6th, 1926.

*** The requirements of seamen in British and foreign ports have often been described in our columns, and we have pleasure in publishing this appeal for an institution which could do excellent work where it is urgently needed.—ED. L.

ALTERATION OF VISION DUE TO BASAL FRACTURE OF SKULL.

To the Editor of THE LANCET.

SIR,—With reference to Dr. Ibotson's suggestion in THE LANCET of July 3rd (p. 43) that alteration of vision may follow upon fracture of the base of the skull, it should be borne in mind that it is in just this type of case that the liability exists to implication of the nerve trunks at their exit at the foramina. Vision that has previously been apparently normal would, undoubtedly, tend "to be indistinct" on the development of even a relative degree of muscular imbalance from, let us say, a paresis rather than a paralysis of some of the muscles supplied by the third nerve. Implication of all the muscles supplied by this nerve is by no means necessary.

It should also be borne in mind that vision which before an accident has been described as normal may in reality have been very far from being orthophoric, but may have given no trouble owing to attention never having been directed to the defect, the nature of the patient's occupation, it may be, having made no call on the finer muscular movements. The accident, leading to fracture of the base, may in reality have unmasked a latent defect rather than have caused the development of anything new (of course, in the case of a minus defect this is not so likely to occur). In this way an amblyopia discovered after cranial injury may be more easily explained than by postulating an actual distortion of the corneal curves to even so trifling an extent as half a diopter, as in the case cited by Dr. Ibotson.

I am, Sir, yours faithfully,

Manchester, July 15th, 1926. W. J. RUTHERFURD.

Obituary.

ROBERT HUNTER STEEN, M.D., F.R.C.P.LOND.,

EMERITUS PROFESSOR OF PSYCHOLOGICAL MEDICINE, KING'S COLLEGE.

WE much regret to record the death of Dr. Robert Hunter Steen, the well-known psychiatrist, who died at Bexhill on July 12th, aged 56.

Robert Hunter Steen was born in Belfast in 1870 the son of Dr. Robert Steen, Ph.D., and was educated at the Royal Belfast Academical Institution and Queen's University, Belfast. His medical education was obtained at St. Mary's Hospital, and in 1894 he graduated with honours as M.B. London. He was house physician at his hospital, and afterwards at the Brompton Hospital for Consumption, when, having decided to take up the specialty of mental disease, he became assistant medical officer at "The Priory," Roehampton. He held the post of assistant also at the West Riding Asylum, Wakefield, and at the West Sussex County Asylum, Chichester, and in 1905 was appointed medical superintendent of the City of London Mental Hospital at Dartford. Here the admirable work which he did is familiar not only to his more immediate colleagues, but to all interested in psychological medicine. Four years later he became professor of psychological medicine at King's College and at the time of his death, having retired from Dartford, he held the emeritus professorship.

Dr. Steen took the M.R.C.P. Lond in 1913 and obtained the F.R.C.P. eight years later, and during his period of office at Dartford wrote much on various aspects of asylum work and mental diseases. Among those contributions to scientific literature may be mentioned papers on exophthalmic goitre, on moral insanity, on dementia præcox, on hallucinations in the sane, and on chronic hallucinatory psychosis, all the latter papers being contributed to the *Journal of Mental Science*. The last essay showed very well Steen's learning as derived from actual experience and sound methods of thought. The work was based upon a series of cases in which the presence of hallucinations was the principal symptom, and some of the cases could be classed as melancholia, while the development of delusion of persecution might in others lead to a provisional diagnosis of paranoia, and yet others might be classified as dementia præcox. In the face of the confusion of category and nomenclature, which was greater then than now, Steen set out to show that there were hallucinatory cases which could be grouped together on a well-defined clinical entity. Throughout his discussion of the differential diagnosis he recognised the difficulties of classification in the way that is now leading to a much better clinical understanding of mental symptomatology, while he prophesied that the multiplication of special out-patient departments at large hospitals, by familiarising more observers with psychological patients, would greatly improve the treatment of early disease, and that psycho-analysis would prove of service.

Psychological medicine has lost in Steen a valuable thinker and worker. He was a keen exponent of humane methods and spared no pains in the abolition of all that savoured of prison in the treatment of the insane, keeping the ideal of the mental hospital steadily before him, and before a large public.

HELEN BEATRICE DE RAZTRICKE HANSON, M.D., B.S. LOND., D.P.H. OXF.

ANOTHER victim was added to the long list of motor casualties in London streets, when, on July 6th, close to her home, Dr. Helen Hanson was struck by a passing car and killed almost instantaneously.

Helen Hanson studied medicine at the London (R.F.H.) School of Medicine and was a keen and capable student. After qualifying M.B., B.S. Lond. in 1901 she held resident posts at the Bristol Children's Hospital, the Morpeth County Asylum, and the St. Pancras Infirmary. She then went to India as a medical missionary and was attached to the Kinnaird Hospital, Lucknow, where she was much beloved by patients and colleagues. She was the principal surgeon to the hospital and performed a large number of major operations. The climate affected her health and she was invalided home after three years' service. In 1911 she became assistant medical officer to the L.C.C., a post to which she returned after a break during the war. To school medical work she devoted great energy, never forgetting that prevention of disease was the object to be arrived at. She took a personal interest in the nurses who worked under her, and was very popular among them, and her care of the children was maternal.

When the war broke out Dr. Hanson volunteered at once for foreign service. She went through the siege of Antwerp with Mrs. Stobart's unit, and escaped, among the last to leave, on the top of a motor 'bus packed with ammunition. Later she went to Serbia, where she was established in a hospital under canvas at Kragujevatz and found again opportunity to do much surgical work. She left Serbia during the summer of 1915, before the last invasion of the country, and returned to England through Russia. Shortly afterwards she became a temporary medical officer in the R.A.M.C. and was sent first to Malta and afterwards to Salonica, where she remained till the Armistice. Against the persistent refusal of the authorities to give commisisons to women medical officers, which meant loss of prestige and many real difficulties and disadvantages, Dr. Hanson made repeated protest, based on personal experience. Her next move was to Constantinople with the Black Sea Expeditionary Force, where she remained until 1920, when she returned home via Palestine, a journey which was to her full of interest and enjoyment, and stirred her religious feelings deeply.

Dr. Hanson was a woman of many and varied interests. It has been said of her that "she had a genius for friendship." Her friends were indeed legion and none was ever forgotten. In her family circle she was a most devoted daughter and sister. Her loss is one which will leave a blank in many lives.

ANDREW RAE [WILBUR] WRIGHT, D.S.O., M.B.,

BREVET LIEUT.-COL., R.A.M.C.

THE death of Lieut.-Colonel Wright on June 30th, at the comparatively early age of 45, which occurred at the Government General Hospital, Madras, from appendicitis, has cut short a career of great promise, but it is some consolation to reflect that it was already a career of high achievement.

Born at Wigan in 1881, Colonel Wright was the younger and only surviving brother of Prof. William Wright, dean of the London Hospital. He received his professional education at the Owens College, Manchester. After graduation he held amongst other appointments those of house physician at the Manchester Royal Infirmary and senior resident medical officer at the Infirmary, Crumpsall. In 1908 he joined the R.A.M.C., in which corps the remainder of his life was spent. After the usual preliminary course at Aldershot he was posted to Malta, where he was stationed when war broke out. Attached as regimental medical officer to the 2nd Battalion of the Royal Warwicks, he disembarked at Zeebrugge on Oct. 6th, 1914, and took part in the memorable rearguard action fought by the 7th division around Bruges, Hansbeke, Ghent, Thielt, Roulers, and Menin. On Dec. 31st he was posted to command C Section of the 21st Field Ambulance, and on April 19th, 1915, to be second in command of No. 10 Casualty Clearing Station at Hazebrouck. When it was decided to introduce the practice of pitching C.C. stations on open ground without buildings of any kind, the 10th C.C.S. was the first chosen for the experiment, being placed at Rémy siding, near Poperinghe. He remained here for some time, serving, as Major-General Sir Anthony Bowlby writes, "with great credit, a most zealous and capable officer, and a first-rate organiser." He was several times mentioned in despatches and was made a Companion of the Distinguished Service Order. Later he served on the staff, occupying various positions. For his services in the rearguard action leading up to the first battle of Ypres he received the decoration of the Belgian Croix de Guerre. At the close of the war he became personal assistant to the Director-General of Medical Services and later acted in a similar capacity to the Adjutant-General, being, we believe, the first officer of the R.A.M.C. to hold this position. For his services in these posts he received the rare distinction of being, while still a captain, gazetted Brevet Lieut.-Colonel, on promotion to Major. In 1921 Lieut.-Colonel Wright proceeded to India, serving on the staff at Simla and later commanding the British Station Hospital at Roorkee. Returning to England in October, 1925, he was posted D.A.D.M.S. to the British Army on the Rhine, and was one of the last to leave Cologne when the army moved south to Wiesbaden. Early in the present year, however, he returned to India and had just taken up the appointment of Senior Medical Officer at the British Station Hospital, Madras, when he was stricken down with appendicitis, which proved, unhappily, fatal in the afternoon of June 30th. So passed away one who, it is safe to say, is and will continue to be mourned by a singularly large number of devoted friends. The following note from an intimate source will recall "Wilbur" Wright to many of these:—

"A man of commanding presence, he filled most doorways through which he entered and gave an impression of strength and power which was still further accentuated by his imperturbable composure. Reserved and seemingly austere on first acquaintance, his manner rapidly thawed when, as so often happened, acquaintance ripened into friendship. Gifted with a sense of humour—forms of leg-pulling particularly in his earlier days were a favourite amusement, one of his most successful efforts being commemorated in the nom de corps of Wilbur by which he was almost universally known. Devoted to the army, and punctilious in attending to his duties, he yet found time to become well informed on most subjects and to develop a no mean musical talent. Geniality, modesty, and sympathy were the outstanding features in a very attractive personality. With his natural gifts and varied experiences, he seemed destined for positions of still greater influence and honour than those he had already held. It was, however, not to be. Death is common; it is all one in the final event of things; but in his prime, who would not mourn for Lycidas?

> . . . haec . . .
> Accipe fraterno multum manantia fletu,
> Atque in perpetuum, frater, ave atque vale."

ARCHIE REITH FRASER, M.D. ABERD.

Dr. Archie Reith Fraser, who died on July 10th at Plumstead, Cape Province, South Africa, aged 36, was educated at the Aberdeen Grammar School and studied medicine at the University, where he graduated M.B., Ch.B. in 1914, and immediately took a temporary commission in the R.A.M.C. He was invalided from abroad after Neuve Chapelle and on recovery served at home with the 1st Scottish General Hospital, and afterwards at the Scottish Command Venereal Hospital at Robroyston. He acquired a wide and varied experience of venereal work in the

army, and in 1920, having taken the M.D. degree with distinction, he went to Pretoria as a venereal specialist to the Union Government of South Africa. His health soon broke down, but after resigning this post he was appointed university lecturer in venereal diseases at Cape Town. He was intensely keen on this work, and besides a monograph on Gonorrhœa, published a number of papers in the medical journals, all his writings being characterised by originality and clearness of outlook. Those who did not always agree with him could not plead that they did not follow his arguments. He was secretary to the Cape Town branch of the British Medical Association, and Dr. Alfred Cox writes: "He was a really brilliant personality and one could not meet him even casually without having a strong impression left . . . he was a white man all through."

Dr. Fraser was also an accomplished artist. He leaves a widow and two daughters.

OXFORD OPHTHALMOLOGICAL CONGRESS.

UNDER the Mastership of Mr. Philip H. Adams, the sixteenth meeting of the Oxford Ophthalmological Congress took place at Oxford on July 14th to 17th. No meeting was held last year owing to the Convention of English-speaking Ophthalmological Societies, but with this exception the congress has met annually since its inception in 1910. The membership, which in that year was 181, has steadily increased to 380 at the present time. As in past years, the proceedings took place in the Department of Human Anatomy through the kindness of Prof. Arthur Thomson, and members were again indebted to Keble College for hospitality.

The congress was opened on the 15th by a short address of welcome by the Master, followed immediately by a discussion on

Sympathetic Ophthalmia.

Mr. Malcolm Hepburn opened the discussion by outlining the history of the treatment of the condition during the past 50 years and comparing this with present-day methods. He said that owing to the dread of sympathetic ophthalmia occurring even many years after the injury, probably many eyes had been excised in the past which might have proved useful. The general trend of opinion now, however, was against the likelihood of sympathetic trouble appearing after a lapse of years, and it was to those cases of cyclitis developing within a few months after the exciting cause that Mr. Hepburn directed attention. Not all such cases were of the nature of sympathetic ophthalmia, and some scientific method should be aimed at whereby a cyclitis of sympathetic origin, could be differentiated from one due to other causes. Mr. Hepburn suggested that not all eyes which manifest keratitis punctata, even though of sympathetic origin, should be excised, and that many eyes with keratitis punctata following injury or operation should be operated on for the relief of symptoms. He emphasised the value of the differential blood count; a large excess in percentage of the large mononuclear cells with decrease in the polymorphonuclears was a valuable guide in deciding the line of treatment to be taken. Mr. S. H. Browning presented the bacteriological side of the subject dealing chiefly with the question of the differential blood count. Cases were quoted in which a change in the blood count had preceded any other signs of sympathetic ophthalmia and had determined the line of treatment to be followed. He discussed treatment by arsenic preparations of the "606" type, and also the anaphylactic theory of the disease. Dr. G. E. de Schweinitz (Philadelphia) followed with a special reference to the work recently done by Verhoeff and presented at the last meeting of the American Ophthalmological Society. Seven cases of sympathetic uveitis were treated by Verhoeff by frequent subcutaneous or intramuscular injections of diphtheria antitoxin in large doses. In four of the seven a remarkable improvement in vision was obtained, but the effectiveness of the treatment was most striking in causing a rapid subsidence of the inflammatory condition. Mr. Harrison Butler pointed out the value of the slit-lamp in detecting the earliest signs of the disease and mentioned illustrative cases.—Mr. Russ Wood described two cases in each of which the reaction to tuberculin tests was positive.—Prof. Emile de Grósz (Budapest) stated that in the past 50 years 150 cases of sympathetic ophthalmia had been treated at the No. 1 Eye Hospital at Budapest, making ·28 per cent. of the total patients seen. Ten per cent. of these had followed operations, most of which had been performed elsewhere. In his view repeated operations on injured eyes increased the risk of sympathetic trouble. He was convinced that the inflammation was metastatic in nature.—Lieut.-Colonel H. Herbert referred to the iris-inclusion operation for glaucoma and the supposed risk of sympathetic ophthalmia.—Mr. J. Gray Clegg spoke on the occurrence of the trouble after evisceration.—Lieut.-Colonel A. E. J. Lister commented on the rarity of the disease in hot dry climates.—The following also took part: Mr. A. F. MacCallan, Mr. A. Greene, Dr. Arnold Verrey (Lausanne), Mr. T. C. Summers, Mr. R. J. Coulter, Mr. N. C. Ridley, Mr. A. Zorab, and the Master. Mr. Hepburn and Mr. Browning replied.

Demonstrations in the Scientific Museum.

The afternoon was given up to demonstrations in the Scientific Museum. Colonel Herbert demonstrated an iris inclusion operation for glaucoma, Dr. G. Young showed statistics on ophthalmometry, Colonel Lister presented tables showing the weights of 180 cataractous lenses with details as to patients' weight, age, blood pressure, &c.—Dr. Thomson Henderson showed microscopical specimens of the ciliary region in mammalia and demonstrated his apparatus, showing the mechanism of accommodation.—Mr. Tomlinson demonstrated his light-sense test for the light-adapted eye.—Lieut.-Colonel W. V. Coppinger showed (*a*) a prothesis of crude Indian manufacture which had cut through the lid of the wearer, and (*b*) prints of the plans of the new Calcutta Eye Hospital.—Dr. Burdon-Cooper demonstrated Pulfrich's phenomenon and brought forward evidence that the explanation was one connected with accommodation rather than with dark-adaptation.

In an adjoining room the most recent ophthalmic apparatus and instruments were on exhibit by a number of well-known firms.

The Doyne Memorial Lecture.

On Friday morning papers were read by Dr. Young on (*a*) Can an amblyopic eye recover good vision, and (*b*) a suggestion as to the cause of the invisibility of the retinal vessels and explanation of Purkinje's phenomenon. The former referred to the case of a man of 60 with an amblyopic eye associated with internal strabismus who had lost the vision of the good eye from embolism; the vision of the emblyopic eye improved in a year from less than 6/60ths to 6/6ths. Dr. Marion Gilchrist presented some interesting medico-legal cases. The Doyne memorial lecture was delivered by Dr. Thomson Henderson, of Nottingham, on the Anatomy and Physiology of Accommodation in Mammalia. Some original theories on the physiology of accommodation were put forward whilst the anatomy of the ciliary region was shown in a valuable series of slides and drawings from various mammalia, including man. At the conclusion of his lecture Dr. Henderson was presented with the Doyne memorial medal for the year.

In the afternoon Lieut.-Colonel H. Smith presented a review of the various methods of performing intracapsular extraction of cataract and described in detail his own latest method of expression, the outcome of his work during the past winter in India. The paper

was discussed by Colonel Lister and Colonel Coppinger, Mr. Zorab, Mr. Harrison Butler, Mr. Walker, Mr. Coulter, and Mr. Jaques.

On the morning of Saturday Dr. T. S. Good, medical superintendent of the Oxford City and County Mental Hospital, read a paper entitled Psychology and the Eye, in which he gave details of cases where the relief of trouble caused by refraction error had had a marked effect in clearing up mental disturbances and of other cases in which no result was obtained, although eye symptoms were prominent in these, but without abnormality in the eyes themselves.

Mr. Harrison Butler followed with an instructive paper on the signs of inflammation in the eye when examined by the slit-lamp. The proceedings of the meeting concluded with a paper by Dr. Margaret Dobson on the macular region as seen by red-free light. Some interesting drawings of the appearance presented by the macula in both normal and diseased conditions were shown and revealed changes which could not be easily detected by other means.

The annual dinner took place on the evening of July 15th in Keble College, amongst the guests being Sir Archibald Garrod and Prof. J. A. Gunn.

Medical News.

UNIVERSITY OF OXFORD.—The Theodore Williams Scholarship in Anatomy has been divided between Mr. G. H. Bateman and Mr. J. H. B. Beal (both of University College). Mr. H. A. Mansell (Pembroke) has been elected to the Theodore Williams Scholarship in Pathology.

UNIVERSITY OF CAMBRIDGE.—The following candidates have now satisfied the examiners in both parts of the examination for the Diploma in Tropical Medicine and Hygiene:—

Herbert M. Ayres, James L. Dunlop, Bandi Ethirajulu Neil E. Goldsworthy, Riad Abdel Noor Henein, *Farid Hilmy, Wasfy Omar, *Trilok Chand Puri, Francis C. Tibbs, and *Abdul Wahid el Wakil.

* Distinguished in the examination for Part II.

At recent examinations for the Diploma in Medical Radiology and Electrology the following candidates were successful:—

Part I.—I. Arons, Frances Dooley, H. Franklyn, L. Freeman, H. M. Grey, Elsie H. Parker, and Constance A. P. Wood.

Part II.—I. Arons, A. E. I. Connolly, J. D. Dhruv, A. C. Dixon, H. H. Elliot, Mollie Fisher, H. Franklyn, Margery Freeborough, H. J. Louw, P. J. McKenna, Elsie H. Parker, R. Phillips, S. J. Rom, A. C. Rusack, J. O. P. Smith, H. T. Stack, J. G. Stephens, and Constance A. P. Wood.

UNIVERSITY OF EDINBURGH.—The following candidates have passed the Final Examination for degrees of M.B., Ch.B.:—

Ashley G. Abraham, Katharine H. Aitchison, John B. Allan, Arthur M. Anderson, David Anderson, Frederick P. M. Anderson, Hyman E. Bernstein, William W. Besson, Lucia L. C. Black, Philip W. H. Bleasdale, Abraham Bortz, Irene Bott, George S. Broadbent, George Brown, Mary A. Buchanan, George R. Burnett, William D. Cairns, Robert A. Cameron, John Campbell, Sine Kirstine Carlsen, Eric L. Carter, John A. Chapel, James B. Cherry, Robert Cormack, David K. Crawford, Edith E. Cromb, Harold T. Crossley, Lillie S. Dickson, Maurice B. D. Dixey, George S. N. Dow, David C. Dunlop, Derrick M. Dunlop, Annie C. Easterbrook, James A. Elliot, Dorothy Ellison, Robert Everett, Isabelle B. S. Flett, Arthur D. Frazer, Patrick C. Garson, Anne Gibson Hubert J. Gibson, Robert S. Gilchrist, James C. Gilroy, Frank O. Graham, James D. A. Gray, Evelyn F. Hartley, Vincent L. P. Hayes, Lillian A. Hayward, James R. Henderson, Muriel G. Henderson, William R. Henderson, Margaret R. Henry, Jane A. Horne, Jessie Horne, Leonard C. Huggins, Margaret H. Hunter, Jess Marian Ireland, Stanley Jackson, May Jones (with distinction), Mohamed C. M. Kaleel, Martha Keith, Alfred L. Kiow, Pauline Klenerman, John Lamb, William L. Lamb, Noel A. Large, Martha J. Lennox, Luke N. Liang, Julius Lipetz, John Litt, James L. Lochhead, Maurice L. Lucas, Robert B. Lumsden, John Macdonald, Cecil T. M'Inerney, Donald C. Mackenzie, Archibald J. M'Kinlay, Margaret I. M'Kinlay, William M. M'Lellan, Margaret G. M'Millan, Robert L. M'Morris, Margaret M'Murray, George H. Macnab, George R. M'Nab, James A. S. Macpherson, Saadallah Madwar, Samuel Layinka Ayodeji Manuwa, Robert M. Marshall, Hamish F. Masson, Aileen E. Mathers, David M. W. Maxwell (with distinction), William B. Millar, Gavin W. Milroy, James E. Monro (with distinction), Susannah S. Murdoch, Ranald M. Murray-Lyon, Honor O. Newell, Doulgas N. Nicholson, John S. Oliphant, Nathaniel Taiwo Olusoga, James P. D. Parsons, Andrew Patrick, Kumara Nilkanda Pillai, Neelakanda Palpoo Pillai, Richard E. H. Pulipaka, William M. Quin, Syed Abdur Rahman, Frank M'Lean Richardson, Frances A. Roberts, John B. Rolt, Archibald Ronald, William R. Russell, Vidya Vati Saberwal, Simon Tsoi Mook-Sang, John M. Sanson, Richard G. A. Savage, Charles M. Scott, William S. Shearer, William Simpson, Evan Siung, Angus D. Smith, Francis A. M'C. Somerville, Michael Stein, Leo J. Stone, Thomas M. Strang, Ian N. Sutherland, Harry Sweidan Margaret E. N. Tait, Cyril G. K. Thompson, Dorothy A. S. Thompson, William E. Thompson, Violet B. Tulloch, Lionel Turiansky, Robert L. Turner, Frank Walker, Victor G. H. Wallace, John H. Watson, David Wilkie, Philip M. Wood, Thomas V. Woods, Harold R. Worth, Helen A. Wright, and David J. Young.

ROYAL COLLEGE OF SURGEONS OF EDINBURGH.—At recent examinations out of 22 candidates entered the following five have passed the Final Professional Dental Examination and have been granted the Diploma L.D.S. R.C.S. Edin.:—

Margaret Leslie, Kenneth Stewart, Richard V. P. Campbell, Hugh Linn, and Max Nathan.

ROYAL COLLEGE OF SURGEONS OF ENGLAND.—At a meeting of the Council held on July 8th the following were elected Hunterian professors for the ensuing collegiate year: Sir Arthur Keith (six lectures on Recent Researches carried out in the Museum); Mr. Zachary Cope (Shock and Collapse in Acute Abdominal Disease); Mr. J. E. H. Roberts (The Diagnosis and Treatment of Intrathoracic Tumours); Mr. E. M. Cowell (Recent Advances in the Surgery of Hernia); Mr. A. H. Southam (The Pathology and Treatment of the Retained Testes in Childhood); Mr. W. B. Williams (The Importance of Toxæmia Due to Anaerobic Organisms in Intestinal Obstruction and Peritonitis); and Mr. J. Howell Evans (Testicular Tumours of Congenital Organs). The following were elected Arris and Gale lecturers: Mr. R. St. Leger Brockman (The Cause of Toxæmia and Death in Acute Obstruction); Dr. Hildred Carlill (The Simulation of Surgical Affections by Hysteria); and Dr. Alfred Piney (Hyperplasia and Neoplasia in Lymphatic Tissue). Mr. C. E. Shattock was elected to the Erasmus Wilson lectureship and will give six demonstrations on pathology. Sir Arthur Keith, as Arnott demonstrator, will give six demonstrations on the contents of the Museum. Mr. Richard H. Burne was elected physiological curator, Mr. C. F. Beadles pathological curator, and Sir Frank Colyer honorary curator of the Odontological Collection.

FELLOWSHIP OF MEDICINE AND POST-GRADUATE MEDICAL ASSOCIATION.—The Fellowship of Medicine announces that the last of the demonstrations arranged for this session will be given by Mr. Dorrell at the Royal Eye Hospital, Southwark, on Friday, July 30th, at 3 P.M. This will be open to members of the medical profession without fee. Attention is directed to the formal lectures at the North-East London Post-Graduate College, Tottenham, which are delivered at 4.30 P.M. throughout the week, and are open to members of the Fellowship of Medicine. Subscription to the Fellowship is 10*s.* per annum, which includes a copy each month of the *Post-Graduate Medical Journal*. A late afternoon course of instruction in neurology will be given at the West End Hospital for Nervous Diseases throughout the week at 5 P.M. The fee for the course will be £1 1*s.* and it will continue until August 12th. Owing to unforeseen circumstances the intensive course to be given at the Brompton Hospital for Chest Diseases has been cancelled. The entire clinical work of the hospital will, however, be available to graduates daily throughout the month on payment of 1 guinea. From August 18th to 28th the Queen's Hospital for Children will hold an all-day course covering instruction in all departments of the hospital. The hospital staff are kindly providing luncheon and tea. The Queen Mary's Hospital has arranged an intensive brush-up course from August 23rd to Sept. 4th for the benefit of those who wish to refresh their knowledge in up-to-date hospital practice. The Fellowship can accommodate graduates with practical courses in anæsthetics and weekly practical courses in obstetrics and child welfare at the City of London Maternity Hospital. The fee for the latter is £2 2*s.* a week and personal application must be made at the office of the Fellowship. Full particulars and details of the various courses may be had from the Secretary of the Fellowship at 1, Wimpole-street, London, W. 1.

RESIGNATION OF PROF. MATTHEW HAY.—The University Court of the University of Aberdeen has accepted with regret the resignation of Prof. Matthew Hay from the Chair of Forensic Medicine, and has passed a minute of appreciation of his valued services to the University, extending over the long period of 43 years. The minute sets forth the services of Prof. Hay: "The indebtedness of the whole University to his ability and assiduity both in teaching and administration, to his patience and impartiality, and his sagacity and foresight in the supervision of the finances of the University, cannot be overestimated."

ROYAL SOCIETY OF MEDICINE.—Although the society's house will be closed as usual during August for cleaning, the library will be open on week-days from 11 A.M. to 6 P.M., except on Saturdays, when it will close at 1 P.M.

VICTORIA UNIVERSITY OF MANCHESTER. — The following awards have been made: Sheridan Delépine Fellowship in Preventive Medicine, M. A. Omar; Robert Platt Physiological Scholarship, Cæcilia E. M. Pugh; Prof. Tom Jones Exhibition in Anatomy, Dorothy A. Geiler.

TRINITY COLLEGE, DUBLIN: POST-GRADUATE COURSE.—The School of Physics has completed arrangements for a post-graduate course which will begin on Sept. 13th and finish on Oct. 2nd. Classes will meet in the Medical School of Trinity College and in several of the Dublin hospitals.

AT the quarterly meeting of the directors of the Naval Medical Compassionate Fund, held on July 6th, Surgeon Vice-Admiral Sir Joseph Chambers, Medical Director-General of the Navy, in the chair, the sum of £55 was distributed among the several applicants.

NEW HOSPITAL FOR LYME REGIS.—The cottage hospital at Lyme Regis, which is in the heart of the town, has long been unsuitable for its purpose, but it has been difficult to replace it. The obstacles have now been removed by the generosity of the Rev. G. F. Eyre, who has presented to the hospital the large residence known as Herne Lea.

HOSPITAL FOR DISEASES OF THE HEART AND LUNGS.—The Prudential Assurance Company is providing £3250, the cost of building a laboratory for pathological research work at the City of London Hospital for Diseases of the Heart and Lungs, Victoria Park. This is the only hospital in the East End which deals solely with affections of the heart and lungs.

THE LATE DR. H. EDMONDSON.—Dr. Herbert Edmondson, who died at his home at Reedley on July 13th, had practised for nearly 25 years in the Burnley district as an aural and ophthalmic surgeon. Educated at Repton, Cambridge, and the London Hospital, Dr. Edmondson graduated M.B., B.Ch. in 1901. He was honorary ophthalmic and aural surgeon to the Burnley Victoria Hospital and to several other institutions in the neighbourhood.

DINNER TO DAME MARY SCHARLIEB.—A dinner, organised by the London Association of the Medical Women's Federation, was held at the Welbeck Palace Hotel, on July 15th, in honour of Dame Mary Scharlieb. The President, Dr. Christine Murrell, regretted the absence of many friends who had been unable to attend at such short notice. The health of the principal guest was proposed by her old friend and fellow-student, Dr. Jane Walker, who spoke warmly of her personal qualities and professional standing. Dame Mary Scharlieb was over 40 years of age before she ever had a scalpel in her hand, and now, at 81, she was still operating with unimpaired judgment and skill. Dr. W. Carr paid tribute not only to the outstanding surgical ability of Dame Mary Scharlieb, but to her high character, without which her other qualifications would have been useless, if not even dangerous. All her friends would rejoice at the national recognition of her services, which were the more valuable because love of her fellow-creature had prompted them. Lord Riddell pointed out that the British virtues of courage, pertinacity, and ability were combined in her with charm of manner and an unusual and enduring vitality. Sir Alan Anderson praised the pioneer spirit that was an inspiration to younger women who were attempting to open up other professions to women. Mrs. Scharlieb's example and reputation could not fail to help to allay prejudice against women workers in every sphere. Lady Barrett, speaking as dean of the London (R.F.H.) School of Medicine for Women, spoke of the pride of all members of the school in the honour that had been conferred on Dame Mary Scharlieb. There had been great excitement, and in certain quarters some misgivings, when a previous honour had been paid her—that of being the first woman to be appointed on the staff of any general hospital in this country. Dame Mary Scharlieb had soon silenced any doubts by the swiftness and skill of her operative technique, and her unfailing courtesy to the sisters in charge of the wards. In reply, Dame Mary Scharlieb said that if life were a quest for happiness, she had discovered how to achieve it, in the love of God and of her friends. Among the guests present, other than the speakers, were Sir John Rose Bradford and Sir James Berry.

PENSIONS FOR HOSPITAL OFFICERS AND NURSES.—Definite steps have now been taken by 69 of the hospitals in London to start a general contributory system of pensions for hospital officers and nurses on the lines of the draft scheme published by King Edward's Hospital Fund for London in November last. It is anticipated that the system will be in operation on or before Jan. 1st next.

SMALL-POX AND POOR-LAW INSTITUTIONS.—A circular has been issued by the Ministry of Health drawing the attention of guardians to the need for care in the admission to Poor-law institutions of persons who may be suffering from small-pox. Unrecognised cases of this disease, it is stated, have been the means of spreading infection in such places, and attention is drawn to the regulation that before admission every applicant must be examined by the medical officer.

A COMMITTEE has been appointed by the Privy Council to consider whether any modifications are desirable in the Poisons and Pharmacy Acts. The members are Mr. E. Mitchell-Innes, K.C. (chairman), Mr. L. G. Brock, Sir Malcolm Delevingne, Mr. F. W. Gamble, Sir W. Graham-Harrison, Sir Donald MacAlister, M.D., Mr. E. T. Neathercoat, Mr. Colin Smith, Mr. G. Stubbs, Sir William Willcox, M.D., and Mr. A. E. Young. The secretaries are Mr. M. D. Perrins, of the Home Office, and Dr. E. W. Adams, of the Ministry of Health.

BEIT MEMORIAL FELLOWSHIPS.—A senior Fellowship (£600 per annum) has been awarded to Ernest Basil Verney, and fourth-year Fellowships (£400 per annum) to William Kershaw Slater, Harold John Channon, and John Maurice Hardman Campbell. The following have been elected to Junior Fellowships (£350 per annum):—

Richard James Lythgoe, M.A., B.Ch. Camb., Sharpey Scholar, University College, London, who will investigate the electrical reactions of the optic and auditory nerves.

Frank Macfarlane Burnet, M.D. Melb., temporary assistant, the National Collection of Type Cultures, Lister Institute, London, who will study bacteriophage in relation to the treatment of enteric bacillary infections.

John Glover Hugo Frew, M.Sc. Birm., working at the Research Hospital, Cambridge, who will investigate the physiology of the blow-fly.

Maurice Walter Goldblatt, M.D., B.Sc. Belf., working at St. Thomas's Hospital, who proposes to continue his study of (1) the relation between ketosis and alkalosis; (2) the fate of the two terminal carbon atoms in the fatty acid chain during the hypothetical β-oxidation process; and (3) the rôle of insulin in fat metabolism.

James Tutin Irving, B.A. Camb., now junior demonstrator in Biochemical Department, Cambridge, who will undertake research in the Biochemical Department, Oxford, on the metabolism of carbohydrates and allied compounds in the animal body.

John Gower Stephens, M.B., M.S., B.Sc., Sydney, now working at the Physiological Department, Cambridge, who intends to make a further study of the functions of the spleen by the method of window observation.

Barnet Woolf, B.A. Camb., working at the Sir William Dunn Institute, Cambridge, who will undertake a comparison of some chemical reactions induced by resting bacteria with those induced by animal tissues.

PAYMENT OF PANEL DOCTORS.—The system by which panel practitioners are paid by attendances is confined to the Manchester and Salford areas and to the Isle of Man, all the rest of the country having adopted the capitation system. In order to discover whether Manchester doctors want to fall into line, the Manchester Medical (and Panel) Committee has been taking a postal vote of all insurance practitioners, of whom there are about 400 in the Manchester and Salford area. The total number of insured persons who now come under the attendance system (in the Manchester, Salford and the Isle of Man) is about half a million, and some 14,000 doctors are in panel practice in the area. Insured persons who come under the capitation system in other parts of the country number about 14½ millions. In its report the committee discusses the differences between the two systems. The amount of money available for distribution is the same, calculated on the number of insured persons in each area. Under the attendance system, no doctor working single-handed can receive more than £1125. Under capitation a doctor's list may not exceed 2500 insured persons. A large amount of clerical work is entailed by the attendance system, as compared with the capitation system. Under the attendance system, the number of services rendered to each insured person in Manchester was 4·38 for 1923, and in all other areas 3·75 for the same year. The actual payment per service per insured person in Manchester for 1923, worked out at 1*s.* 11*d.*, and in some other areas at 2*s.* 7*d.* As a result of the postal vote Salford insurance practitioners have decided to fall into line with the general rule in the country—i.e., they have declared themselves in favour of the capitation basis.

STANLEY HOSPITAL, LIVERPOOL.—At the fifty-ninth annual meeting it was stated that during 1925, for the first time in its history, the hospital's income equalled the expenditure. There is still, however, a debit balance of over £10,000.

A YEAR'S WORK AT GUY'S HOSPITAL.—The report for 1925, which has just been issued, contains a mass of interesting and important matter. In the department of finance it is pointed out that annual subscriptions and donations are apparently stationary at less than £12,500, about 7½ per cent. of the total expenditure, and "a small recognition of the hospital's service to the public." The bicentenary appeal for a capital sum to relieve the hospital and medical school of debt has produced £86,500, considerably more than half of which has come from what may be called domestic sources—governors, medical, surgical, and dental staff, old Guy's men, the administrative staff, Past and Present Nurses' League, and the Ladies' Association. The income and expenditure account has been balanced by appropriating £18,200 from the Bicentenary Fund. Patients' voluntary contributions amounted to £6000; payments from the Hospital Saving Association on behalf of its working-class members increased from £1690 to £5000. Ordinary expenditure has increased by nearly £10,000. The report records that in no previous year of its history has the hospital "admitted so many patients, relieved so much suffering, or made such advances in the knowledge and treatment of disease." Since 1921 the increase in the number of patients passed through the wards has amounted to more than 1000 a year. The cost of each occupied bed was £207 10*s.* 6*d.*, and since some 400 new out-patients are dealt with every working day the governors will shortly be confronted with the need for reorganising and enlarging the out-patient department. The department of deep X ray therapy possesses only one machine, and there is urgent need for two additional installations. A nurses' representative council has been established, the members of which are selected by ballot from among the nurses of each year, and some useful reforms have already resulted. A more liberal diet has been supplied to the nursing staff. There has been no lack of applicants for training as nurses, and they have shown a notable record of success in the State examinations; the whole of the candidates for the certificate of the C.M.B. were successful. Sympathetic reference is made to the death of Dr. G. H. Hunt, physician to the hospital, whose work, it is remarked, "had marked him out as a scientific clinician who would some day have ranked among the most distinguished physicians of his time."

INFECTIOUS DISEASE IN ENGLAND AND WALES DURING THE WEEK ENDED JULY 10TH, 1926.

Notifications.—The following cases of infectious disease were notified during the week:—Small-pox, 128 (last week 135); scarlet fever, 1374; diphtheria, 853; enteric fever, 85; pneumonia, 590; puerperal fever, 37; cerebro-spinal fever, 9; acute poliomyelitis, 5; acute polio-encephalitis, 1; encephalitis lethargica, 37; dysentery, 20; ophthalmia neonatorum, 115. There were no cases of cholera, plague, or typhus fever notified during the week.

Deaths.—In the aggregate of great towns, including London, there were 3 (1) deaths from enteric fever, 18 (0) rom measles, 6 (0) from scarlet fever, 27 (3) from whooping-cough, 17 (2) from diphtheria, 48 (8) from diarrhœa and enteritis under 2 years of age, and 35 (8) from influenza. The figures in parentheses are those for London itself.

THE LANCET: SUBSCRIPTION RATES.

INLAND	One Year	£2	2	0
	Six Months	1	1	0
	Three Months	0	10	6
ABROAD	One Year	2	10	0
	Six Months	1	5	0
	Three Months	0	12	6

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Parliamentary Intelligence.

NOTES ON CURRENT TOPICS.

University of London Bill.

THE University of London Bill passed the Report stage in the House of Lords on Tuesday, July 13th.

Mental Defectives Bill.

A new Bill introduced by the Government amending the law with regard to mental defectives was introduced and read a first time in the House of Lords on Thursday, July 15th.

The Royal Assent was given to the Bethlem Hospital Act on Thursday, July 15th.

HOUSE OF COMMONS.

WEDNESDAY, JULY 14TH.

Invaliding Tests in the Navy.

Mr. HORE-BELISHA asked the First Lord of the Admiralty to what causes the Admiralty attributed the fact that 95 per cent. of those invalided from His Majesty's Navy were denied pensions on the ground of non-attributability, seeing that every one of these men had passed a severe test of physical fitness on entering the service.—Mr. BRIDGEMAN replied: A disability is not regarded as attributable to the service when it is due to ordinary conditions of service such as might equally have arisen had the invalided rating been engaged in a civilian occupation, or when it is due to conditions of health that are normally constitutional in origin. Every officer or man is subjected on entry to a thorough physical examination, but from time to time disabilities of an obscure or latent character are bound to escape detection. Moreover, the mere passage of time may produce a condition of health which, although it does not necessarily unfit a man for civil occupation, renders him unsuited to a fighting service where the highest state of physical fitness is required, and his invaliding then becomes necessary. I would remind the hon. Member that pensions are granted in non-attributable cases where the invalided man has a certain minimum period of service.

Physical Tests for Post Office Employees.

Captain GARRO-JONES asked the Postmaster-General whether there remained any appointments under his control which were not open to ex-Service combatant officers or men on the ground that, though in good health, they had not the physical strength or height necessary to fulfil their duties.—Sir W. MITCHELL-THOMSON replied: An ex-Service man is given preference for Post Office employment wherever possible, but it occasionally happens that a candidate does not reach the required standard of physical fitness—modified, I may say, in the case of disabled ex-Service men—or is below the minimum height fixed by definite regulations.

THURSDAY, JULY 15TH.

THE MIDWIVES AND MATERNITY HOMES BILL.

On the order for the consideration of the Lords amendments to the Midwives and Maternity Homes Bill,

Lieut.-Colonel FREMANTLE moved that the House do agree with the Lords amendment to Clause 1 providing that the clause should not apply in the case of a person who while undergoing training with a view to becoming a duly qualified medical practitioner, or a certified midwife, attended a woman in childbirth as a part of a course of practical instruction in midwifery recognised by the General Medical Council or by the Central Midwives Board. He explained that this amendment had been inserted as necessary to safeguard the work of medical students under tuition. Although they were not qualified men they were doing useful work under proper safeguards in training schools.

The Lords amendment was agreed to.

Lieut.-Colonel FREMANTLE moved that the House do agree with the following amendment to Clause 11 inserted in the Lords:—

(1) A local supervising authority may grant exemption from the operation of this part of this Act in respect of: (*a*) Any hospital or other premises for the conduct of which a duly qualified medical practitioner resident therein is responsible; or (*b*) any hospital or institution not carried on for profit and not used mainly as a maternity home.

(2) A local supervising authority may at any time withdraw an exemption granted by it under this section.

(3) Any person who is aggrieved by the refusal of local supervising authority to grant exemption under this section in respect of any hospital, premises or institution, or by the withdrawal of any such exemption previously granted by the authority, may appeal against the refusal or withdrawal to the Minister of Health, and the Minister, after considering the matter, shall give such directions therein as he thinks proper, and the authority shall comply with any directions so given.

He said that this amendment was necessary in order to allow certain social welfare institutions which occasionally took in maternity cases incidental to their work to escape

inspection where the local supervisory authority thought it could safely be done. He thought it would appeal to all members of the House when they realised that there were certain homes known as rescue homes, and other places of that sort, which occasionally had cases of women who gave birth to children. They came to those homes and were properly looked after, but it was of the essence of the good work of those institutions that there should be no publicity about it. It was especially in connexion with the Salvation Army that they had been approached. Obviously there would be some difficulty unless the matter were left to the judgment of the proper authority. The local supervisory authority was therefore given power to exempt in such cases.

Mr. A. V. ALEXANDER said that the hon. Member must know that an amendment of this kind was very controversial. The principle involved was of very great importance. A large number of the maternity cases which were likely to be dealt with in this class of home were cases from the working class, and the amendment was not all in the interest of working-class mothers who might be confined in institutions of that kind. He suggested that in view of the strong feeling likely to be aroused that the amendment might be withdrawn in order that the House might have time to consider it.

Dr. DRUMMOND SHIELS said in regard to the first amendment he had nothing to say; he thought it was quite necessary. But in regard to this one, while he was in general sympathy with it, he thought it required a little consideration. On the whole there was an effective safeguard in the fact that the inspecting authority would have to be satisfied of the bona fides of any hospital or similar institution before exemption was given. But he would like the hon. Member to consent to another safeguard—namely, that the exemption given should not extend for more than 12 months.

The SPEAKER: I take it that the hon. Member is objecting. If that be so, as it is after 11 o'clock the debate must stand adjourned.

The further consideration of the Lords' amendments to the Bill was adjourned.

The Death in Bedford Prison.

Mr. HAYES asked the Home Secretary whether he was aware that the governor of Bedford prison advised the prison doctor on several occasions on and after May 19th to remove prisoner Russell to a hospital cell and inform the relatives of the prisoner's serious illness; that this advice was not acted upon; that the doctor stated that the man was not seriously ill and would be all right in a day or two; that the governor reported to the Prison Commissioners that he was not satisfied that the doctor had done all that could have been done for the prisoner; whether these points were considered at the Home Office inquiry; and whether the Prison Commissioners took into account, when submitting their recommendations to him, the 36 years of unblemished record of the governor and his consistent advocacy for many year of prison and penal reform.—Sir WILLIAM JOYNSON-HICKS replied: I am very sorry to have to answer questions which compel me to go into details concerning the degree of blameworthiness of an officer who, apart from this painful incident, had a long record of valuable service to his credit, and I will be as brief as possible. Every point that could be urged in his favour was considered at the inquiry, and every factor was taken into consideration by the Commissioners and by me, but the responsibility of the governor of a prison for what goes on under his management must be recognised, and I felt that it was my clear duty after what had happened in this case to take the course that I announced to the House a fortnight ago.

Motor Bicycles as Cause of Street Accidents.

Mr. WARDLAW-MILNE asked the Home Secretary whether his attention had been drawn to the large number of motor accidents, particularly in connexion with motor bicycles, which were now taking place, and whether, in view of this, he would instruct the police authorities to prosecute more rigorously the riders of motor bicycles who were travelling at very high speeds, in preference to instituting prosecutions against motor-car drivers who, under reasonable conditions of traffic, drove their cars at a speed which slightly exceeded that laid down by law.—Sir WILLIAM JOYNSON-HICKS replied: I can only say that the police will continue to do all they can to check the driving of both motor-cars and motor-cycles at speeds which are dangerous to the public.

Swimming for School-children.

Colonel WOODCOCK asked the President of the Board of Education if he would consider instituting a compulsory course of swimming for school-children, after passing a medical examination, as a definite part of the school curriculum where facilities for swimming were available, and if he was aware of any education committees in the country who had already taken steps for systematically teaching the art of swimming to the scholars.—Lord EUSTACE PERCY replied: I think my hon. friend underestimates the work already being done. A large number of authorities already prescribe systematic courses of instruction in swimming and, in general, I do not believe that it is necessary or desirable that the Board should issue detailed directions to authorities in regard to curriculum.

MONDAY, JULY 19TH.

Veterinary Inspection of Imported Meat.

Sir ROBERT THOMAS asked the Minister of Agriculture whether he was aware that the steamer *Cambrian Countess* had just delivered 250 head of cattle from the Argentine at Zeebrugge, and that a British veterinary surgeon, appointed by the Ministry of Agriculture, had subjected these animals to examination and had certified them to be free from disease; that the animals had been slaughtered and sent to the London market, via Harwich, as fresh meat at considerably less than home-produced meat; and, having regard to the need of reducing the cost of living, whether he would permit similar regular shipments subject to the same veterinary inspection.—Mr. GUINNESS replied: The vessel in question had sailed from Argentina before the date in which the Importation of Carcases (Prohibition) Order came into force. In view of the special circumstances of the case carcases from this cargo were allowed to enter the country subject to a special veterinary examination of the animals both before and after slaughter. I regret that I cannot see my way to accede to the suggestion contained in the last part of the question. The importation of live animals from South America is prohibited by order on account of the prevalence of foot-and-mouth disease in some parts of that continent, and the establishment of a slaughter-house at Zeebrugge for the purpose of this trade is an evasion of the Ministry's Order. There is also the additional risk that infection might be brought from Belgium, where foot-and-mouth disease is particularly rife at the present time.

Treatment of Mentally Defective Child.

Dr. VERNON DAVIES asked the President of the Board of Education if he was aware that Frederick Charles Joyce, now of 65, Heap-street, Oldham, was a mentally defective child with spinal curvature; that his father was killed in action in 1915; that his mother had since died, and that he, his brother, and a sister were living with their mother's sister, Mrs. Sparkes, at the above address, which was an ordinary four-roomed house; that Mrs. Sparkes's family, consisting of a husband and six children, lived also in this house, one of the children suffering from tuberculosis and another being mentally defective; that for the last two years the War Pensions Committee had been trying to get Frederick Charles Joyce removed from such unsuitable surroundings in vain; that they had been assisted in these attempts by the local education authority; and whether the Board of Education would arrange for the accommodation of this child in an institution.—Lord E. PERCY replied: The case of this boy has been already brought to my notice. I am making inquiries to see if anything can be done in the direction suggested by my hon. friend, and I will let him know the result.

Importation of Opium from India.

Mr. PONSONBY asked the Under Secretary of State for the Home Department what amount of opium was sent to this country from India, and for what purposes was it used.—Sir W. JOYNSON-HICKS replied: 116,000 lb. of raw opium were imported into this country from India in 1925 and 16,000 lb. were exported during the same year. The Indian opium retained in this country is used for the manufacture of morphine and other drugs and medicinal preparations.

Medical Staff of the Ministry of Health.

Lieut.-Commander KENWORTHY asked the Minister of Health if he would give a list of the names of medical men employed by the Ministry other than whole-time staff, and what salaries they received.—Mr. NEVILLE CHAMBERLAIN replied: Colonel L. W. Harrison is the only part-time member of the medical staff of the Ministry. His salary is £1500 a year. Medical men are employed by the department from time to time, as occasion requires, as part-time referees, to assist the Regional Medical Staff in dealing with cases of insured persons referred by approved societies for examination and advice as to incapacity for work. They receive no appointment, salary, or guarantee of employment, and are remunerated by a fee of two guineas for each session.

Illness among Junior O.T.C. Members.

Mr. RENNIE SMITH asked the Secretary of State for War what was the illness which prevented 3660 members of the junior division of the Officers' Training Corps from attending camp last year, and whether it was the same cause which kept away large number in the preceding years.—Sir L. WORTHINGTON-EVANS replied: Such information as is available goes to show that the epidemics in question were principally mumps and German measles, and that the same diseases were responsible for preventing a large number of

members of the junior division of the Officers' Training Corps from attending camp in the previous year.

TUESDAY, JULY 20TH.

Public Health in India.

The House went into Committee of Supply, Captain FITZROY in the chair.

On a vote of £47,401 for the salaries and expenses of the India Office,

Earl WINTERTON, the Under Secretary for India, referred to the decision of the Government of India to extinguish their exports of opium, except for medical and scientific purposes, by progressive annual reductions. The Government of India had decided to reduce the exports in ten years, when the process would be complete. The total exports for 1926 would be reduced by 10 per cent. in each subsequent year, so that the last export would take place in 1935. The bulk of the recommendations of the Lee Commission with regard to the Civil Service, including those of a financial character, had been implemented. A decision in the case of almost all officers appointed by the Secretary of State in Council had been reached and most of the recommendations of the Government of India and the local governments in respect of officers appointed by them had been received and were being considered. The rest were expected shortly. All possible steps to expedite a decision were being taken. The Public Services Commission had been appointed and the chairman had already gone to India, while the commission would meet on October 1st. The position in regard to recruitment for the Indian Services continued to improve in a satisfactory manner. The entries for the Civil Service examination to be held next month showed a total of 183 against 143 last year.

Sir GEOFFREY BUTLER said that there was very much that could be done by British people in this country and in India attached to the Government to help on progress in regard to the various transferred subjects. The statement one sometimes heard and the assumption one sometimes encountered that the subjects transferred to the Provincial Governments were inadequately administered was one of which there was no proof. But looking at these scientifically transferred services from the point of view of the Indian public, Indian public officials, or scientific experts, no one would contemplate with equanimity the severance or isolation of their activities from the best and most modern Western thought. In the medical, scientific, industrial, and agricultural research fields it would be a thousand pities if they found that they had put these transferred services in water-tight compartments. Therefore, he would like to know what relation existed between the scientific and technical activities of the Government of India and those of the Provincial Governments. What, for example, were the relations between the central officials and the various technical officials in the public health departments of the provinces? Was the central organisation going to fade out of the picture as was the case to some extent at Washington? One could not exaggerate the importance of scientific work in the future development of India. We had won India by the sword, and we wanted to keep her for our commerce, but we must woo her by means of scientific methods. India was a paradise for those engaged in scientific research. Anyone who wanted to conduct experiments in botany, physiology, into various forms of disease, and so forth, could not wish for a better field of work. He suggested that facilities should be given in our universities for students from India who came here to take up scientific research.

The Vote was agreed to.

Suspension of Meals for School-Children in Scotland.

Mr. THOMAS KENNEDY asked the Secretary for Scotland whether he was aware that during the summer holidays, extending over seven weeks, the Clackmannanshire education authority has decided not to continue the provision of meals for necessitous children on the ground that the authority was under no obligation to provide meals except when the children were actually in attendance at school; whether he proposed to sanction this action on the part of local education authorities; and, if not, whether he proposed to take any steps to ensure that meals were provided during the vacation.—Sir J. GILMOUR replied: I have no information at all regarding Clackmannanshire, and such information as has reached me regarding Ayrshire suggests that the hon. Member is under a misapprehension as to the decision reached by that authority. On the general question, however, I may remind him of the legal position as stated in Circular 67, issued under the instructions of my predecessor in office. Education authorities in Scotland have no general powers of feeding, but they have a duty to deal with particular cases, and provided that the circumstances of a case come within the provisions of the statute this duty would not appear to be affected by holidays. It is only if and when there is reason to believe that any authority is neglecting that duty, that it will be open to me to consider what action can appropriately be taken.

Communications with the Shetland Islands.

Sir ARCHIBALD SINCLAIR asked the Under Secretary to the Scottish Board of Health whether, in view of the need, particularly on the ground of public health, for the improvement of communications between the island of Stroma and the mainland, the Government would consider experimenting with the installation of low-power wireless telephony on the duplex system on this island.—Sir J. GILMOUR replied: The establishment of communication by wireless telephony between the island of Foula and the mainland of Zetland for medical service purposes is under consideration at present. Should the arrangements which it is hoped to make in that instance prove successful, and not unduly expensive, I shall be glad to consider whether assistance can be given from the Highlands and Islands (Medical Service) Fund towards the cost of similar arrangements for the other islands to which the ordinary telegraph and telephone services do not extend.

Dust-shoot Nuisance at Purfleet.

Mr. LOOKER asked the Minister of Health if he was aware of the nuisance and the menace to the health of the neighbourhood caused by the dust-shoot at Purfleet; and if he would take steps to see that this nuisance was not continued and that no fresh dust-shoots were allowed to be created.—Sir KINGSLEY WOOD replied: An inspection was made some two years ago of the two tips to which my hon. friend refers and that inspection did not disclose any nuisance or menace to health. My right hon. friend has, however, directed that a fresh inspection shall be made in the immediate future.

Houses Built of Concrete and Special Materials.

Mr. HERBERT WILLIAMS asked the Minister of Health the number of houses completed during the 12 months ended March 31st, 1926, which were constructed of materials other than ordinary bricks and natural stone.—Sir KINGSLEY WOOD replied: Returns from local authorities of houses built with State assistance show that during this period approximately 10,000 houses constructed of concrete or by other special methods were completed. Statistics are not available for houses built without State assistance.

Tuberculosis Dispensaries.

Colonel DAY asked the Minister of Health what steps are being taken by his department with a view to the greater utilisation of the opportunities provided by the tuberculosis dispensaries.—Sir KINGSLEY WOOD replied: My right hon. friend is not clear what further use of the tuberculosis dispensaries the hon. Member has in mind. These dispensaries are provided by the local authorities and my department have always encouraged their full use as centres for diagnosis, observation, and special forms of treatment.

Increasing Cost of Working-class Houses.

Viscountess ASTOR asked the Minister of Health whether officials of his department were inquiring as to the reasons for the increasing costs of working-class houses; and, if so, to what causes was the continuous rise attributed.—Sir KINGSLEY WOOD replied: A constant watch is kept by my right hon. friend's department upon the trend of house-building prices. An investigation of the reasons for the rise in building costs during the past two and a half years, which is approximately 11 per cent., shows that a rise of wages accounts for from 2½ per cent. to 5 per cent., according to district, and increases in the prices of materials account for about 4 per cent. The remainder of the rise in costs is probably partly due to the increase in the number of houses let in contracts, and in my right hon. friend's opinion the existence of the subsidy may have contributed something in this direction.

Nursing Homes for the Poorer Middle Class.

Major AINSWORTH asked the Minister of Health if his department had any record of the extension of nursing homes or institutions for the poorer middle class for the use of which payment was made on a modest scale; and whether he could take any action to stimulate such provision.—Mr. NEVILLE CHAMBERLAIN replied: The answer to the first part of the question is in the negative. As regards the second part, while I appreciate the need for accommodation of this kind, its provision is a matter for local initiative and there are no funds at my disposal from which assistance can be given.

R.A.M.C. and Dental Corps Officers.

Sir L. WORTHINGTON-EVANS (Secretary of State for War) informed Colonel Clifton Brown that the number of officers not holding permanent regular commissions still employed with the Regular Army on July 1st was 152, which included Royal Army Medical Corps 35, and Army Dental Corps 60.

Medical Diary.

Information to be included in this column should reach us in proper form on Tuesday, and cannot appear if it reaches us later than the first post on Wednesday morning.

LECTURES, ADDRESSES, DEMONSTRATIONS, &c.

FELLOWSHIP OF MEDICINE AND POST-GRADUATE MEDICAL ASSOCIATION, 1, Wimpole-street, W.

MONDAY, July 26th, to SATURDAY, July 31st.—Special afternoon demonstration in Clinical Ophthalmology at the Royal Eye Hospital, St. George's Circus, S.E., on July 30th, at 3 P.M., by Mr. Dorrell. Open to all members of the medical profession, without fee.—NORTH-EAST LONDON POST-GRADUATE COLLEGE, Prince of Wales's General Hospital, Tottenham. Intensive Course in Medicine, Surgery, and the Specialties. Daily, 10.30 to 5.30 P.M. Clinical and laboratory methods, demonstrations, operations, general hospital clinics, and formal lectures at 4.30 P.M. Open to members of the Fellowship of Medicine.—WEST END HOSPITAL FOR NERVOUS DISEASES, 73, Welbeck-street, W. A series of lectures, including clinical demonstrations on selected cases, on the diagnosis and treatment of common diseases of the nervous system. Daily, 5 P.M., Monday to Friday inclusive. Further information from the Secretary of the Fellowship.

NORTH-EAST LONDON POST-GRADUATE COLLEGE, Prince of Wales's General Hospital, Tottenham, N.

Special Vacation Course from July 26th to July 31st. Second week: Daily, to Friday, 10.30 A.M. to 12.45 P.M., Demonstration of Clinical and "Side-room" Methods. 2 to 2.45 P.M., Demonstration of Groups of Clinical Cases. 2.30 P.M. onwards, General Hospital Work, Clinics, Operations, &c. Clinical Lectures.

MONDAY.—3 P.M. to 4.30 P.M., Colonel L. W. Harrison: The Diagnosis and Treatment of Syphilis (cinematograph demonstration).

TUESDAY.—4.30 P.M., Mr. T. H. C. Benians: Septicæmia.

WEDNESDAY.—4.30 P.M., Mr. A. E. Giles: The Treatment of Uterine Fibroids.

THURSDAY.—4 30 P.M., Mr. W. Ibbotson: Laryngeal Spasm, its Causes and Treatment.

FRIDAY.—4.30 P.M., Mr. H. W. Carson: The "Chronic Appendix."

SATURDAY.—11 A.M., Dr. J. K. C. Laing: Demonstration of Typical Cases of Mental Disease (at the Colney Hatch Mental Hospital, New Southgate, N.).

Appointments.

HOWELL, B. WHITCHURCH, F.R.C.S. Eng., has been appointed Surgeon to the Cheyne Hospital for Children, Cheyne Walk, S.W.

JOHNSTONE, ROBERT WILLIAM, F.R.C.S. Edin., M.R.C.P. Edin., Professor of Midwifery and the Diseases of Women in the University of Edinburgh.

MARTIN, J. PURDON, M.D., B.Ch. Belf., M.R.C.P. Lond., Physician at the Dreadnought Hospital, Greenwich.

PENMAN, G. P., M.B., B.Ch., F.R.C.S., Second Ophthalmic Surgeon to the Royal Northern Hospital.

WHITELOCKE, HUGH A. B., M.Ch. Oxf., F.R.C.S. Eng. & Edin., Hon Surgeon, Radcliffe Infirmary, Oxford.

St. John's Hospital for Diseases of the Skin: WIGLEY, J. E. M., M.B., B.S. Melb., M.R.C.P. Lond., and DOWLING, G. B., M.D. Lond., M.R.C.P. Lond., Honorary Assistant Physicians.

Victoria University of Manchester: OLLERENSHAW, ROBERT, M.D. Manch., F.R.C.S. Eng., Honorary Clinical Lecturer in Orthopædics; BAILEY, K. V., M.D. Manch., Demonstrator in Obstetrics; BRUNTON, C. E., M.D. Dub., Demonstrator in Human Physiology.

Certifying Surgeons under the Factory and Workshop Acts: CARTLEDGE, N. E. D., L.R.C.P. Lond., M.R.C.S. (E. Dereham); STEPHENS, J. B., L.R.C.P. Lond., M.R.C.S. (Sutton); MCALISTER, J. G., M.B., Ch.B. Glasg. (Kilmarnock).

Vacancies.

For further information refer to the advertisement columns.

Aberdeen Royal Infirmary.—Two Hon. Jun. Asst. S.'s.

Bolingbroke Hospital, Wandsworth Common.—Asst. Hon. Phys.

Bradford, Children's Hospital.—H.S. £100.

Bradford Royal Infirmary.—H.S. £150.

Brighton, Royal Sussex County Hospital.—Hon. Third Electro-Therapeutist.

Burnley, Victoria Hospital.—H.S. £150.

Burton-on-Trent Infirmary.—Jun. Res. H.S. £150.

Buxton, Derbyshire, Devonshire Hospital.—Asst. H.P. £150.

Cairo, Egyptian University.—Prof. of Pathology. £E.1200.

Cardiff, Welsh National School of Medicine.—Lecturer in Pathology. £750.

Colchester, Essex County Hospital.—H.P. £200.

Darlington County Borough.—M.O.H. £900.

Derbyshire County Council.—Asst. County M.O. £750.

East African Medical Service.—Sanitation Officer. £660.

Grosvenor Hospital for Women, Vincent-square, S.W.—Hon. Asst. Gynæcologist.

London Skin Hospital.—Hon. Phys.

Manchester, Ancoats Hospital.—R.M.O. £150.

Metropolitan Hospital, Kingsland-road.—Hon. Anæsthetist and Ophth. Surg.

Miller General Hospital for South-East London, Greenwich-road, S.E.—Sen. Res. M.O. £250.

Papa Westray, Orkney.—M.O. and P.V. £360.

Rochester, St. Bartholomew's Hospital.—H.P. At rate of £200.

Royal Northern Hospital, Holloway-road, N.—Clin. Asst.

St. Bartholomew's Hospital and Medical College.—Chemical Pathologist and Lecturer.

St. John's Hospital for Diseases of the Skin, 49, Leicester-square, W.C.—Pathologist. £100.

Seychelles Government.—Asst. M.O. R.6500 per annum.

Sheffield Royal Hospital.—Surg. Reg.

Sheffield Royal Infirmary.—Ophth. H.S. At rate of £80.

Swansea Urban District Council.—M.O.H. (part time). £200.

West-End Hospital for Nervous Diseases.—Hon. Phys. and Hon. Surg.

Wolverhampton and Staffordshire Hospital.—H.S. At rate of £150.

York County Hospital.—H.P. £150.

The Chief Inspector of Factories, Home Office, Whitehall, S.W., announces vacancies for Certifying Factory Surgeons at Bishops Stortford, Whithorn (Wigtownshire), and at Pontesbury (Salop).

The Secretary of State for the Home Department gives notice of a vacancy for a Medical Referee under the Workmen's Compensation Act for the Districts of the Bishop's Waltham, Petersfield, Portsmouth, and Newport and Ryde County Courts (Circuit No. 51). Applications should reach the Private Secretary, Home Office, not later than August 4th.

Births, Marriages, and Deaths.

BIRTHS.

GRANT.—On July 15th, at The Manor House, Wilnecote, Tamworth, the wife of Dr. J. V. L. Grant, of a daughter.

MACKLIN.—On July 14th, at Lexham-gardens, W., the wife of Dr. C. H. Macklin, of Ampthill, Beds., of a daughter.

TROUP.—On July 18th, at The Farm House, Stonebridge, N.W. 10, to Jean, wife of Arthur G. Troup, M.D., D.P.H.—a son.

WHITBY.—On July 18th, to Ethel Whitby, M.R.C.S., L.R.C.P., the wife of L. E. R. Whitby, M.B., B.Ch., of Sarre-road, N.W.—a son.

MARRIAGES.

ATTENBOROUGH—SMITH.—On July 15th, at the Parish Church, Harston, Dr. Cuthbert Attenborough, of Lismore, Camberley, to Cicely, daughter of Mr. and Mrs. Thomas Smith, of Harston, Cambs.

HANSON—COX.—On July 15th, at St. Paul's, Knightsbridge, Dr. David C. Hanson, to Norma Constance, daughter of Mr. and Mrs. John M. Cox, of Derryhale, Dundalk, Ireland.

DEATHS.

HUGO.—On July 17th, at Devonia House, Crediton, Devon (the residence of his sister), Edward Henry Hugo, M.B., B.S., of Berryfield, Bodmin, Cornwall, aged 44 years.

ROSE.—On July 15th, at Norbury Lodge, Upper Norwood, Anthony Strong Rose, L.R.C.P., L.R.C.S., L.F.P.S.

STEEN.—On July 12th, at Sutherland-avenue, Bexhill-on-Sea, Prof. Robert Hunter Steen, M.D., F.R.C.P., late Medical Superintendent, City of London Mental Hospital, Dartford, aged 56.

N.B.—A fee of 7s. 6d. is charged for the insertion of Notices of Births, Marriages, and Deaths.

Notes, Comments, and Abstracts.

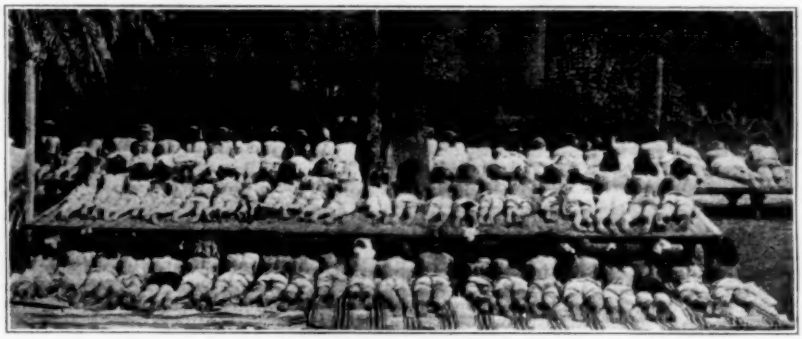
THE TREATMENT OF SURGICAL TUBERCULOSIS

AT THE INSTITUTION OF SANTA MARIA.

BY W. H. BATTLE, F.R.C.S. ENG.,
CONSULTING SURGEON, ST. THOMAS'S HOSPITAL.

A RECENT visit to Cannes has given me an opportunity of seeing the treatment of surgical tuberculosis by exposure to the sun, combined with sea bathing, as carried out by Dr. A. Pascal at the Institution of Santa Maria in that city. This establishment is the first of the kind to be set up in any part of the world and dates from 1903–04.

It was founded by Dr. Pascal and is carried on by him almost entirely at his own expense, with the aid of several sisters of charity, who take charge of the domestic arrangements and training of the inmates. All the patients are females. They are sent by public bodies from various parts of France—even from Paris—and kept until the age of 16, although for a long time there may have been no evidence of tubercle. The cases are mostly examples of tuberculous affections of the glands, skin, bones, and joints. Girls affected by tuberculosis of the lungs, either as the primary disease or as a complication, are ineligible. At the time of my visit there was a case of tubercle of the peritoneum under treatment which had responded so well that the abdominal conditions appeared to have become quite normal.



The Home at Santa Maria: Lying in the sun.

The establishment is on the outskirts of the town, on the shore of the Gulf de Napoule, an access to the sea at any time being assured by means of a private roadway which passes under the railway line and road. This is an important feature, for it eliminates the danger of injury to the patients who are about 200 in number, and would be difficult to shepherd across any road where traffic was permitted.

The grounds are divided into two parts, the one nearer the main building containing garden and playing grouned, with some wooden buildings at the sides which are used as class-rooms when the weather is too wet or the sun too hot. There is plenty of air in these rooms as the garden sides are open. The largest of them is on the right hand facing the sea, and this is used as the main dining room, where the meals are served directly from the kitchen. Some distance beyond this and less protected by the trees is an enclosure in which are sloping benches, on which lie rows of girls lightly clothed and in full exposure to the sun and air. There is usually no covering to this section of the grounds, but arrangements are made to draw blinds across which take away the more intense action of sun during the hotter days of the summer, when the heat might be too great for the patients.

The sleeping apartments are large and well ventilated, and it was pleasant to see how extremely clean everything was kept. Each child is supplied on admission with the necessary garments, and these are placed in a cupboard which bears her name and is separated from adjoining ones. These cupboards are outside the wards. Near them are the lavatories, one feature of which is a long trough in which the patients wash their feet before retiring for the night.

For six months the new arrivals are made to keep their shoes on during the day, but are gradually induced to do without them, so that after this period they join the others, who never wear any foot covering and do not appear to want it. The soles of their feet have become quite impervious to pebbles or other hard objects, and they run about without fear of injury.

When I paid my visit, about 12 o'clock on a February day, after an inspection of the patients, especially those who had been admitted for the more serious joint or bone lesions, the family was called upon to go for the daily dip in the sea. This was a very interesting part of the treatment, which appeared to be much enjoyed by most of them, a few of the more recent younger inmates of the home being, perhaps, less vigorous in their expressions of pleasure. The parade was under the eye of Dr. Pascal, who lives on the spot, and a sister; to make more sure of freedom from danger, each of the smaller children is placed under the charge of a senior. After the bathe comes manual drill for a few minutes and then the midday meal; as one of the rules of the establishment is the provision of good food, it was not surprising to find the tables fill rapidly when the word was given to sit down. The meal was served hot and passed directly from the kitchen, where several of the senior patients assisted, whilst others waited on them at the table. They were a happy looking party, full of energy. All who had been residents for some time were well browned, and their muscular system in hard, excellent condition.

Operations are not done for the tuberculous lesion, but are sometimes required for deformities resulting from the disease; they are seldom needed. A theatre constructed on modern lines was under construction, and a small sterilising plant installed. The usual surgical instruments were already provided by Dr. Pascal. It is very interesting to note the absence of splints and rigid apparatus for fixing joints; the spinal cases were none of them in jackets.

The experiences of the past few years having shown that a certain number of the inmates became slack and lose flesh during the summer months, Dr. Pascal has procured a small estate in the mountains, not far from Glasse, to which they are taken. This is used as an auxiliary to the main institution, and from it the family is supplied with vegetables, fruit, milk, and eggs. A few weeks in this more stimulating air appears very beneficial, and the natural vigour is restored.

During the whole time of their residence the inmates are undergoing training in various subjects according to their age; the younger ones are taught to read and write, to play games, and to look after their clothes. Needlework, housework, cooking, waiting at table, gardening, are added, until, at the time of leaving "their home," they are ready for any form of domestic service. It is truly a very interesting sight to see rows of scantily clad patients lying in the sun, toasting their young bodies until quite bronzed by its rays, and during my whole visit I did not see a single patient who looked otherwise than happy. Not one appeared to find any inconvenience in lying on the wooden benches, and there were but few still using the invalid chairs because it was still inadvisable to move them.

There is no doubt that this institution is doing good work; this was shown by the report published in 1914, and probably another will be issued in a few months giving fuller particulars than I can offer now. It can, however, be said that everything I saw showed the value of this method of treatment, especially when it can be carried out in the surroundings and climate of the Institution of Santa Maria. And it may be added that the devotion of Dr. Pascal, and his interest in "the family" is worthy of the best traditions of the medical profession.

A NEW PURGATIVE.

Dr. Max Einhorn and Dr. H. A. Rafsky, writing in the *Journal of the American Medical Association* (June 5th), report on the use of isacen in a series of 47 cases. (An account of the chemical constitution of this drug appeared in THE LANCET of July 17th (p. 128) under the heading of Analytical Records.) The patients treated were inmates of an institution; all 47 were more or less chronic invalids and were over 60 years old. Tablets containing 0·005 g. were given two, three, or four times daily, and in 39 cases nothing else was needed to keep the bowels tolerably regular. In the other cases an enema or

Epsom salts was given on some days in addition. Twenty-eight of the patients were entirely free from colic or pain whilst using isacen. Of the remaining 19, one had severe pain before and during defæcation, whilst 18 occasionally had some pain either before or during defæcation. The number of movements fluctuated from one to two, seldom three to four, daily. Occasionally there was no movement for a day or two in some of the cases. These results were obtained during one month's trial of the remedy and the patients included sufferers from chronic nephritis, severe chronic constipation, myocarditis, and pulmonary tuberculosis. Dr. Einhorn and Dr. Rafsky conclude by remarking that "a laxative remedy will certainly be more efficacious in healthy persons than in invalids. Isacen has proved of great help in these old and helpless patients and will certainly be of assistance in the routine work of treating constipation." Such a conclusion based on clinical observation is more convincing than formulæ.

THE WARNEFORD MENTAL HOSPITAL.

THE centenary of the Warneford Mental Hospital, which was celebrated on July 15th, forms the occasion for the issue of a brief history of the hospital, which has been compiled for the committee of management. A meeting of the governors of the Radcliffe Infirmary on April 28th, 1813, was the genesis of the hospital, though the expediency of erecting such an institution in the vicinity of Oxford had been previously discussed. A sum of £20,000 was raised, and on July 10th, 1826, the hospital, then known as the Oxford Lunatic Asylum, was opened for the reception of patients "who, though poor, were not paupers; those who, though above poverty, were far from affluence; and those who, though blessed with a sufficiency to meet the ordinary calls on their resources, were unable to satisfy the pressing demands of a heavy calamity." Dr. James Adey Ogle, Aldrich Professor of Medicine, was the first (non-resident) medical superintendent; in 1828 the first resident medical officer was appointed in the person of Mr. F. T. Wintle, and the name of the institution was changed to the Radcliffe Asylum, in appreciation of the large sums of money contributed by the Radcliffe Trustees. In 1843, in order to make some enduring record of the generous benefactions of Dr. Samuel Wilson Warneford, whose donations over a period of 42 years exceeded the value of £70,000, it was resolved again to change the name of the institution, which became known as the Warneford Asylum, later incorporated as the Warneford Lunatic Asylum. At the present time the hospital, which began on 10 acres and accommodated 30 patients, now has an estate of 120 acres and provides beds for 130 patients. It is at the present time a registered hospital for the care and treatment of both sexes of the upper and middle classes when suffering from nervous and mental disorders. Though it has not been possible of recent years to treat so many patients at reduced fees as in times past, those who cannot afford to pay full fees are not refused, and the committee of management invite donations to increase the funds at their disposal for this purpose.

PROFESSIONAL STANDARDS.

To the Editor of THE LANCET.

SIR,—I was called in to attend a patient who had a blood pressure of 235, on the strength of which I prevailed upon him to stay in bed for two or three days. On calling on the fourth day I found his blood pressure was 220. He is an active-minded and energetic man, with very definite ideas of his own, and feels that if he pays, he can go where he likes. On the following day, when I arrived at his house, his blood pressure was 210, and after I had taken it, he informed me that he had been so alarmed at the advice I had given him, about keeping still and quiet, resting in bed and milk diet, that when I had left his house on my last visit he got straight out of bed, dressed himself, and went round to another doctor, A, to whom he explained the whole situation.

Dr. A thereupon, at his request, took his blood pressure and found it was only 160. My patient put it to me afterwards thus: "I have every confidence in you doctors, but I have no confidence in your machine." This opened my eyes to the possibility of a mechanical error in my sphygmomanometer. I was so disturbed at my patient's behaviour, and Dr. A's action, even to the extent of informing my patient that he would stand by his pressure-reading in a court of law, that I thereupon suggested a second opinion of my own choosing. I brought on the following day a specialist of high repute, who examined the patient thoroughly, noting his general condition and took his blood pressure; this was 225, and the consultant gave the patient sound advice about resting in bed until his pressure had absolutely gone down and stabilised itself.

Before the consultant left I took the opportunity of showing to the patient a certificate which I had received from the maker of my blood-pressure machine that very day, when I had taken it to be tested, and it proved to be absolutely accurate against the standard column at their works. The next day I took the patient's blood pressure again, and it was 220. On the following day, on my arrival at the house, there were present not only another doctor, Dr. B, but a specialist brought by him with the full knowledge that this man was under my care. I learned who this second specialist was, and I know who Dr. B is who brought him, also I happen to know who the Dr. A was.

It was interesting to learn that the second consultation resulted in agreement with what the specialist brought by me said, and with all that I had personally told my patient from the start.

Have standards of professional conduct changed?

I am, Sir, yours faithfully,

July 14th, 1926. HONORIUS.

DIPHTHERIA IMMUNISATION.

To the Editor of THE LANCET.

SIR,—A tragedy we hear of from time to time—the loss of an only child from diphtheria—must cause regret to those of our profession who are interested in diphtheria immunisation. Very few parents are aware that they can have their children immunised against this serious disease. I am sure many medical officers of health would be pleased to learn from their colleagues in general practice how they think this knowledge can best be brought home to parents.

I am, Sir, yours faithfully,

C. W. HUTT.

Holborn Town Hall, July 16th, 1926.

THE MEDICAL KING'S PRIZEMAN.

A CORRESPONDENT draws our attention to the fine performance of Dr. F. H. Kelly as a rifle-shot in tying for the King's Prize at Bisley. He writes:—"I may say without fear of contradiction that Dr. Kelly, with the possible exception of Arthur Fulton, also a winner, has for some years been the finest all-round rifle shot in Great Britain. This distinction is all the more remarkable in that he does no rifle-shooting during the year other than at the annual Bisley meeting. Dr. Kelly was third in the competition last year, another medical man, Dr. C. W. Wirgman being second, while another, Dr. C. H. Vernon, was tenth. Dr. Kelly in recent years has won at Bisley the Grand Aggregate in 1914, 1922 and 1923; the All-comers Aggregate in 1922 and 1923; the Service Rifle Championship in 1914; and the Elkington Aggregate in 1923 and 1925. In the King's Prize he has previously reached the final stage in 1920, 21, 22, 23, and 25, winning the Bronze Medal in the first stage in 1922. In 1924 he was again in a leading position in the aggregates but was unable to remain at Bisley for the latter part of the meeting."

We agree with our correspondent that this is a very remarkable record of skill and consistency.

THE REBUILDING OF ST. BARTHOLOMEW'S HOSPITAL IN THE EIGHTEENTH CENTURY.

Now that that venerable house of mercy, St. Bartholomew's Hospital, is about to undergo a scheme of reconstruction, a paper appearing in the current volume of the Hospital Reports, by Sir D'Arcy Power, on the reconstruction begun in 1730 and finished in 1769, has a special interest. Of the buildings of the pre-Reformation Hospital practically nothing is known, but in the year 1617 a plan was made which is still extant and was reproduced in the second volume of Norman Moore's "History of the Hospital." This plan shows that most of the site of the hospital now occupied by buildings for medical or surgical use was then covered with houses. In 1680 the hospital began to be enlarged, and by 1712 a committee decided that three new wards should be built, which came into use about 1714. In 1730 the "first pile decided upon by the Committee of 1723 was begun, James Gibbs being architect and the builder the well-known Ralph Allen, of Prior Park, Bath, who supplied the stone from his own quarries." The foreman in charge of the work was Richard Biggs, and, showing that present-day difficulties in the building trade are not new, we find Mr. Allen writing that "Allabaster's people, who are setting the stone, are abusive and very idle. The carpenters too are very dilatory in laying the floors." The "first pile" consisted of the present Great Hall, with its staircase ornamented by the Hogarth paintings, and the Treasurer's House. By 1736 a second pile was ordered—i.e., the present south wing, and in 1743 a third pile was begun, the present west wing. Then came the war of the Austrian succession, which held up the building until 1749, when building recommenced. The block was finished and came into use about 1752. With this date the first portion of Sir D'Arcy Power's paper ends.